



**DRIVERS OF CUSTOMER BRAND ENGAGEMENT:
AN APPLICATION TO VIRTUAL BRAND COMMUNITIES ON
FACEBOOK**

by

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Biographical note

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Abstract

Customer brand engagement (CBE) has been gaining popularity among academics and practitioners as a central customer-brand relationship construct. The emergent literature on CBE, largely conceptual and focused on an individualist approach of the construct, offers a partial representation of CBE that neglects the analysis of its components, drivers and outcomes. For instance, to date, there has been no single study to solidly determine the drivers of CBE and explore their role in the CBE process. In this sense, the purpose of this doctoral thesis is to identify the key brand constructs related to the CBE process and integrate them into a comprehensive model. Drawing on quantitative methodology, the study examines the CBE drivers and tests whether and how they directly and indirectly influence CBE. In the same way, the study considered moderators that can improve or reduce the causal effects of the drivers. A survey of 799 customers provided data for empirical testing. The study identifies as drivers of CBE the involvement of the customer with the brand, the customer interactivity with the brand's Facebook page and the customer flow experience in the brand's Facebook page. Findings also show that customers who engaged with the brand in a community on Facebook are more likely to offer positive WOM, be satisfied and committed to the brand, and trust it. Additionally, customers who actively participate on the brand's Facebook page are more likely to be engage with the brand when they have a strong and trusting connection with the social networking site of the brand, they perceive to have some knowledge about the brand or considered that the brand has a high reputation. Theoretically, the study offers new insights about the nomological network of CBE. Managerially, the research improves the understanding about the CBE process, which can be used to reinforce and redefine focused strategies and tactics.

Resumo

Customer brand engagement (CBE) tem vindo a ganhar popularidade junto de académicos e profissionais como um factor central no relacionamento entre o consumidor e a marca. A literatura emergente sobre CBE, em grande parte conceptual e focada numa abordagem individualista, oferece uma representação parcial de CBE que negligencia a análise das suas componentes, *drivers* e *outcomes*. Por exemplo, até à data, não há nenhum estudo que determine de forma sistemática os *drivers* de CBE e explore o seu papel no processo de CBE. Neste sentido, o objectivo desta tese de doutoramento é identificar os constructos-chaves da marca relacionados com o processo de CBE e integrá-los num modelo abrangente. Com base numa metodologia quantitativa, o estudo examina os *drivers* de CBE, e analisa se e como eles influenciam directa e indirectamente CBE. Da mesma forma, o estudo considera moderadores que podem melhorar ou reduzir os efeitos causais dos *drivers* em CBE. Um questionário a 799 consumidores forneceu os dados para efectuar os testes empíricos. O estudo identifica como *drivers* de CBE o envolvimento do consumidor com a marca, a interactividade do consumidor com a página de Facebook da marca e a *flow experience* do consumidor. Os resultados também mostram que os consumidores que se envolveram com uma marca numa comunidade no Facebook são mais propensos a oferecer WOM, a estarem satisfeitos e comprometidos com as marcas, e a confiar nela. Além disso, no caso dos consumidores que participam activamente na página de Facebook da marca, CBE será mais facilmente alcançado quando estes consumidores se identificam e têm confiança na rede social da marca, percebem que possuem algum conhecimento sobre a marca ou consideram que a marca tem uma elevada reputação. Teoricamente, o estudo oferece novos *insights* sobre a rede monológica de CBE. Ao nível da gestão, o estudo melhora a compreensão sobre o processo de CBE, o que pode ser usado para reforçar e redefinir estratégias e táticas ao nível da marca.

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1. Introduction

Nowadays, with communication technologies and sophisticated information systems, it is possible to interact with and among customers (Brodie *et al.*, 2013; Schamari and Schaefer, 2015). As a result, new forms of customer/companies interaction appeared and customers became an active and important part in the companies' communication. In this matter, social media provides the opportunity to connect, share and exchange information with customers (Sashi, 2012). Moreover, the interactive nature of these digital media also allows customers to share and exchange information with one another (Gambetti *et al.*, 2015) and talk to companies (Mangold and Faulds, 2009; Tsai and Men, 2013). Consequently, customers can generate content, create value and influence purchase decisions of others in peer-to-peer interactions. The traditional roles of seller and customer have changed (Sashi, 2012). The customer of the 21st century became a major factor in influencing various aspects of customer behavior, such as awareness, information acquisition, opinions, attitudes, purchase behavior, and post-purchase communication and evaluation (Brodie *et al.*, 2013; Gambetti *et al.*, 2015; Sashi, 2012; Tsai and Men, 2013).

Although customers interact with thousands of products and brands in their lives, they develop an intense connection to only a small subset of these objects. Gambetti and Graffigna (2010) identify three types of factors that underline the importance of customer brand engagement (CBE) on building and maintaining a strong relationship between the customer and the brand, as well as achieving competitive advantage. The factors are customer-related, media-related and company-related factors. In the current global market, customers are looking to satisfy composite needs, co-create brand content and value, as a way of self-expression, socialization with others and enjoyment of new experiences. Consequently, companies have to focus on these facets of customer behavior, as well as on the cognitive and emotional dimensions. In terms of media-related factors, the gradual fragmentation of audience and proliferation of new and improved media means are forcing companies to rethink their media mix. Finally, regarding company-related factors, a successful brand strategy should center on the company's ability to pursue a marketing approach that supports a clear brand identity

overtime, and combines the principles of market proximity and customer experience management.

The advent of social media has resulted in a loss of control for companies, since customers are now more empowered to voice their ideas and to find a broad audience (Schamari and Schaefer, 2015). In this sense, CBE plays a key role in the new customer-centric marketing approach and is becoming a priority in branding strategies (Hollebeek, 2011a). Despite being a recent concept in the marketing literature, CBE is already considered a fundamental driver in the customer decision-making process (Bowden, 2009; Sprott *et al.*, 2009). Customer brand engagement has emerged as a prominent construct that is capable to affect customer behavior with brands (Dwivedi, 2015). In addition, CBE goes further than satisfaction and loyalty, providing a real competitive advantage (Kumar *et al.*, 2010). As customer engagement can be positive and negative, monitoring and managing customers interactions have become an important part of brand management (Schamari and Schaefer, 2015). In this sense, managers are increasingly concerned with how to best engage customers in order to develop favorable customer experiences (Marbach *et al.*, 2016), which are essential in building sustainable differentiation and creating a long-term relationship between brands and customers (Vivek *et al.*, 2012).

For these reasons, CBE is receiving an increasing attention in recent marketing literature. It was considered a key research priority (MSI, 2010; MSI, 2014) and has been the subject of several special issues in international academic journals (e.g. Journal of Service Research, 2010; Journal of Strategic Marketing, 2010; Journal of Product & Brand Management, 2014; Special Issue of the Journal of Marketing Management, 2016). Both from the academic and managerial point of view, CBE is considered the most desired quality in any customer-brand relationship (Baldus *et al.*, 2015; Brodie *et al.*, 2013; Dessart *et al.*, 2015, 2016; France *et al.*, 2016; Leckie *et al.* 2016; Maslowska *et al.*, 2016). However, the current insights into CBE process in social media are limited and few (empirical) studies have investigated factors explaining CBE in this context. The majority of academic studies is conceptual and tends to focus on an individualistic approach of customer engagement. Moreover, the nomological network of the construct is embryonic and largely conceptual. As a result, studies offer a partial representation of CBE that neglects the analysis of its components and the context (social, cultural and

relational) in which the customer-brand encounter takes place. Additionally, very little empirical evidence exists to show what antecedents lead to a strong CBE. Although the concept of CBE sounds very appealing, conceptual studies and the few empirical studies have not clearly identified the different dynamics of the CBE process, which may not only account for different customers' motivations, but also explain customers' intentions to engage with brand. In particular, its specific drivers remain nebulous. Furthermore, to date, there has been no single study that has taken a complete examination of all antecedents of CBE, which have been theoretically investigated in the literature in a disperse way.

1.1 Research Objectives

Thus, there is a gap in the literature and an opportunity to gain a better understanding of the role that each antecedent plays in the CBE process by empirically examining key relationships that have theoretical and managerial implications. On the other hand, the study of CBE is also of pragmatic relevance, since engage customers with brand have emerged as a priority in marketers' agenda (Keller, 2011). According to Schultz (2007), practitioners have been long devoting their energy to establish a strong and endure bond between brand and customers based on an ongoing effort of the brand to activate customers through interactions, shared values, experiential contents and rewards. Therefore, one of the key objectives of many marketing professionals is to have an engaged customer base (Dessart *et al.*, 2015). Consequently, the reportedly drivers and positive implications of CBE on the customer behavior are driving the academic and practical interest in explaining and understanding the CBE process. Thus, more empirical evidence is required to provide a coherent picture of how CBE is affected (Hollebeek *et al.*, 2014), particularly in social media (Dessart *et al.*, 2016; France *et al.*, 2016). As a result, the main contribution of this doctoral thesis is its consolidated and empirical approach to the study of the drivers of CBE. Unlike previous conceptualizations, the approach of this doctoral thesis considers the analysis of all antecedents as well as the impact of some crucial mediators and moderators. Additionally, by developing and testing a more comprehensive model of the simultaneous effects of several key drivers, this investigation is able to improve the understanding about CBE and contribute to this field of study with new insights.

Hence, the goal of this doctoral thesis is to move beyond domain-specific findings and individual brand constructs. i.e., to move beyond the analysis of case studies that only addresses one brand and a partial representation of the CBE nomological network. In this sense, the purpose is to identify the key brand constructs related to the CBE process and integrate them into a comprehensive model. So, by examining its antecedents and testing whether and how they impact CBE, identify and examine precisely which factors may be essential in the CBE process. As such, the doctoral thesis operationalizes the CBE as defined by Dwivedi (2015) and identifies as its antecedents the following constructs: customer involvement, customer participation, customer interactivity, customer flow experience, customer word-of-mouth communication, customer cumulative satisfaction, customer trust and customer commitment. In the same way, customer's perceived brand reputation, customer's perceived brand knowledge, customer's identification with the social networking site and trust towards it are considered to be potential moderators of the CBE process. Additionally, the final model is tested based on the customer's gender and type of brand perceived by the customer. The doctoral thesis also addresses the customer (an existing user of the brand) as the focal "engagement subject", the brand as the "engagement object" and the social networking site Facebook as the "engagement context".

1.2 Research Questions

Thus, the research questions of this study are the following: (i) What are the main drivers of CBE?; (ii) What are the factors that directly and indirectly influence the CBE process?; and (iii) What moderating effects are expected to occur in the CBE process?. The first research question aims to detect the main drivers to accomplishing CBE *per se*. By this manner, it turns possible to identify what are the main emotional, cognitive and behavior constructs in the CBE process. Based on the results of the first research question, the second research question purposes to clarify the interactions between the CBE drivers identified, as well as integrate them into a comprehensive model. So after examining the direct and indirect effects on the nomological network of CBE, the third research question aims to test the moderating effect on the CBE process. In the same way, the effects of the customer's gender and the type of brand perceived by the customer on the CBE nomological network are also tested.

1.3 Strucure of the Doctoral Thesis

The doctoral thesis is organized as follows.

Chapter I is dedicated to the literature review of the main themes of this doctoral thesis and to the theoretical framework. Firstly, the different definitions and interpretations of brand are presented, as well as their categorization and relation with customers. Secondly, the engagement concept is explained from the point of view of other social sciences, such as sociology, psychology, educational psychology and organizational behavior. This section also presents the main definitions of customer engagement, characteristics and scales. Thirdly, the relevant sub-processes found in literature are presented, regarding the engagement process, and potential relations between them. Fourthly, based on the literature review, the theoretical framework of the analysis is developed. Finally, the study context is defined and characterized in terms of its relevance.

Chapter II is devoted to the empirical study, presentation of methodology, analysis of results and conclusions. Giving the nature of this investigation and its research questions, the methodology followed is quantitative. The multivariate technique choose to analyze the data collected through a structured questionnaire is structural equation modeling (SEM). Based on a random sample of 799 customers, the results show that customer involvement, customer interactivity and customer flow experience are required antecedents of CBE in the context of a social networking site (Facebook). Additionally, customer's trust in the brand's Facebook page improves the majority of the main causal effects along with the customer's identification with the brand's Facebook page. Moreover, this study shows that customer commitment, trust, WOM referrals and cumulative satisfaction are outcomes of CBE.

CHAPTER I

LITERATURE REVIEW AND CONCEPTUAL FRAMEWORK

2. Brands and customers

2.1 Introduction

This section (Section 2) aims to present a literature review of the main aspects of the customer-brand relationship and how this relationship is developed in the context of social media and online brand communities.

In this sense, this section presents the main definitions and interpretations of brand (Section 2.2), as well as the categorization of brands according with their features (Section 2.3), the relationship between customers and brands (Section 2.4) and the nature of brand communities (section 2.5). The last section (Section 2.6) is dedicated to conclusions.

2.2 Definitions and interpretations of brand

Brand is a complex phenomenon, because brands are omnipresent and penetrate almost every aspect of our life (Maurya and Mishra, 2012). In the two last decades, marketing science has evolved in a way to prioritize branding as one of the essential activities of businesses. For the reason that brands provide recognition and differentiation to companies, which in turn generates value for customers and the business itself (Keller, 2011).

Chernatony and McWilliam (1989) identified four interpretations of brand: (i) brand as a differentiating device; (ii) brand as a shorthand device for customers; (iii) brand as a promise of consistent quality; and (iv) brand as a mean of projecting self-image.

The interpretation of the brand as a differentiating device follows the American Marketing Association Committee definition. This way brand is a “name, term, design, symbol, or any other feature that identifies one seller's good or service as distinct from those of other sellers”¹.

The second type of interpretation views the customer as an efficient information searcher and processor that relies on the brand as an informational chunk. As customers have limited cognitive capacities, through the use of the brand name, they are able to recall numerous attributes by interrogating memory. Despite being an improvement compared with the previous definition, this interpretation only recognizes how the myriad of marketing activities are integrated in customer's mind to form the brand

¹ <https://www.ama.org/resources/Pages/Dictionary.aspx?dLetter=B&dLetter=B>, accessed March 2, 2015.

entity. It does not enable the marketer to decide which brand's attributes should be developed and associated with the brand's name.

In the third interpretation, brand is used as a statement of consistent quality. The brand name is used as "the device to enable recognition of a company's product and its specific quality level" (Chernatony and McWilliam, 1989, p. 161). Functional performance is sometimes the heart of what a brand has to offer and serve as the foundation which gives brands permission to engage with customer in an additional meaningful way (Keller, 2012). In many cases, customers have primarily utilitarian-based attitudes towards a brand and only value the brand for its functional role, associated benefits and inherent characteristics of brand attributes. Despite being an improvement on the interpretation of the brand, this meaning stresses quality without mentioning the other elements of the marketing mix that play a role in establishing the brand in the customer's mind.

Finally, the last interpretation sees brands as "symbolic devices that have a personality which users value beyond their functional utility" (Chernatony and McWilliam, 1989, p. 163). This interpretation looks past functional brand considerations, such as effectiveness, efficiency, and focus on brand's emotional considerations (Keller, 2012). Emotional considerations focus on symbolic benefits, on the social desirability of the brand and its self-expressive value, that satisfy customer's high level needs and engage them in additional meaningful ways (Hwang and Kandampully, 2012; Keller, 2012).

Following the work of Chernatony and McWilliam (1989), Chernatony and Riley (1998) established another categorization of the broad range of definitions of the brand. They identified twelve categories: (i) brand as a legal instrument; (ii) brand as a logo; (iii) brand as a company; (iv) brand as a shorthand; (v) brand as a risk reducer; (vi) brand as an identity system; (vii) brand as an image in customers' minds; (viii) brand as a value system; (ix) brand as a personality; (x) brand as a relationship; (xi) brand as adding value; and (xii) brand as an evolving entity.

The notions of the brand as "legal instrument", "logo", "company" and "identity system" share a common orientation regarding the interpretation of the brand from an input frame of reference (Chernatony, 1993). In this context, brands are primarily seen as marketing resources needed to support marketers and consequently meet their goals.

Hence, brand as a legal instrument represents an investment of the company and their consequent ownership of the title as a way of protection against imitators, while brand as a logo is the visual feature as a basis for differentiation. The interpretation of the brand as a “legal instrument” and a “logo” correspond to the definition of brand proposed by the Oxford English Dictionary² and the American Marketing Association, respectively. By considering the company as the brand, the product lines become as an extension of the corporate personality. As a result, a coherent focus across the brand portfolio and messages is achieved. Finally, brand as an identity system defines a brand in holistic terms. This interpretation emphasizes the brand’s identity as a structured whole of six integrated facets of culture, personality, self-projection, physique, reflection and relationship.

From an output frame perspective, “branding is not something done to consumers, but rather something they do things with” (Chernatony, 1993, p. 174). In this perspective brand can be interpreted as a “shorthand”, a “risk reducer”, an “image in consumers’ minds”, a “value system”, a “personality”, a “relationship” and as “adding value” (Chernatony and Riley, 1998). Similarly to the interpretation of Chernatony and McWilliam (1989), the interpretation of a brand as a shorthand sees brands as devices of functional and emotional characteristics that enables customers to recall information and facilitate a speedier purchasing decision. As customers perceive risk when they buy products or services, brands can also be seen as a risk reducer. This interpretation understands brands as a contract between the company and the customer, where marketers try to instill customer confidence through their brands. In this sense, brands can reduce risk by giving customers confidence that they know what they are getting and by establishing presumptions of quality (Jones and Bonevac, 2013). Other type of interpretation is the brand as an image in customer’s minds. In this sense, brand is a complex symbol that represents a variety of concepts and characteristics that tell to customers several things by the way it sounds and through the body of associations acquired over time. Other perspective (customer behavior theory) defends that customers’ decisions are influenced by personal and cultural values. Under this interpretation, individual brands are representations of unique clusters of value and the

² “A type of product manufactured by a particular company under a particular name”, from <http://www.oxforddictionaries.com/definition/english/brand>, accessed on March 10, 2015.

definition of brand comprises its functional capability, its embedded meanings and its relevance to customers of symbolic values. However, one thing is what the customers perceive and another is what the company communicates. Therefore, brand as an image is the way customers perceive the brand's personality, while brand as a personality is the result of the company's communication. Brand as a personality defines brands as symbolic devices with personalities that users value beyond their functional utility. In the process of choosing between brands, customers assess the fit between the brand's personality and the personality they wish to project, ending up choosing the brand with higher value and best personality to them. Having a respected personality is a pre-requisite for a relationship between brands and customers, which in turns is a logical extension of brand's personality. The recognition and respect for each other's personalities would lead to a strong bonding and attitude reinforcement along with repeat-usage. Finally, in the interpretation of brand as adding value, brands are said to add value to products. This value is perceived by customers as a relevant and unique added value that matches their needs more closely.

On the other hand, the interpretation of brand as an evolving entity argues that the definition of brand depends of the stage of development, especially for commodity products. Brands evolve in response to corporate actions, marketing campaigns, customer experience with products, changing customer's preferences and alterations in the competitive landscape (Jones and Bonevac, 2013). At each stage, the emphasis of the brand gradually shifts from the company to customers, in such a way that brands develop into a personality, offering emotional appeals besides product benefits.

Based on these interpretations, Chernatony and Riley (1998) defined brand as “a multidimensional construct whereby managers augment products or services with values and this facilitates the process by which consumers confidently recognize and appreciate these values” (p. 427).

2.3 Categorization of brands

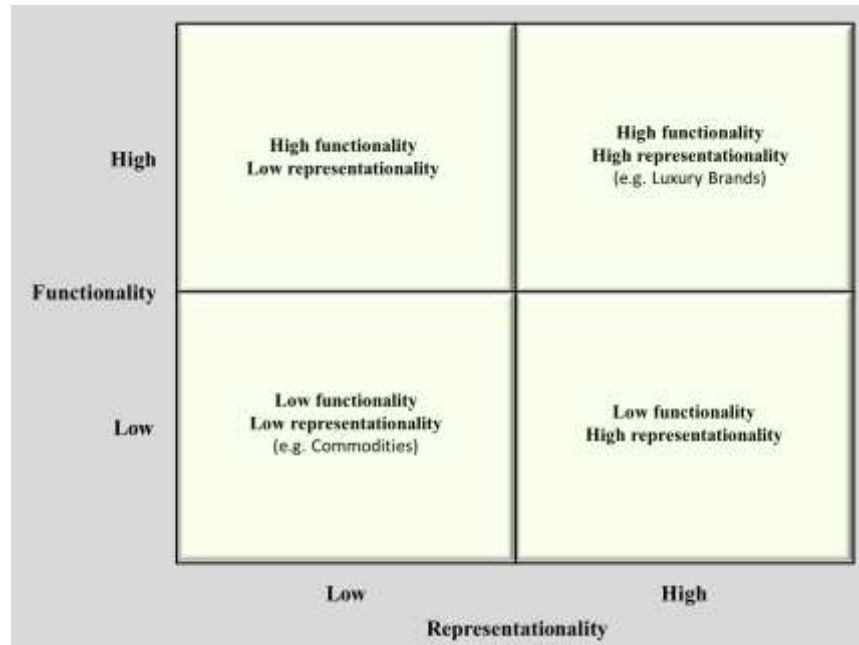
Gardner and Levy (1955) were the first to argue that brands should be divided into a technical capability and a personality dimension. Solomon (1983) also suggested that consumption of brands depended on two dimensions: the functional utility and social meaning.

This general way of thinking about brands has been continued by Chernatony and McWilliam (1989) and Chernatony (1993). According to them, brands can be described by the extent to which they satisfy performance needs (functionality) and personal expression needs (representationality). Functionality relates to a “brand’s ability to satisfy consumers' utilitarian performance needs in a given situation, through physical and service attributes” (Chernatony, 1993, p. 179). Chernatony and McWilliam (1989) define predominantly functional brands as the “names which marketers have developed to both distinguish between competing offerings and facilitate purchasers' and users' decision-making through rapid recall of consumer-relevant performance benefits” (p. 165). The value of these brands has more to do with the product's functional capabilities and physical attributes than with the purchaser's personality. Therefore, marketers made a continued investment and a promotional activity that stresses functionality, in order to maintain superiority. On the other hand, representationality describes a “brand's capabilities to express consumers' feeling about their personality, roles and emotions in a given situation to themselves, or to others, as well as enabling them to better understand other brand users” (Chernatony, 1993, p. 179). Brands which are predominantly representational are defined as having: “a set of consistent beliefs and meanings held by their purchasers and users which are associated with the product or service, but which exist over and above its obvious physical functioning” (Chernatony and McWilliam, 1989, p. 165). In this sense, this dimension is built on the idea that customer use brands to help them to express something about themselves. Consequently, the promotional strategy of these brands favors the communication of the type of person who would use the brand, instead of what the product does and is made of. However, it should be noted that brands are not only characterized by one of these dimensions, but by the combination of the two (Chernatony, 1993; Keller, 2003; Brito, 2010). No brand can be seen as entirely representational; there is always some dimension of functional quality inherent in any brand (Brito, 2010). This functional component depends on the quality perceived by the customer, their expectations regarding the performance of the brand and their analysis of characteristics and specific attributes of the brand such as price, quality or design (Hwang and Kandampully, 2012).

Hence, customers discriminate between competing offers by the degree of representationality and functionality expressed by a particular brand. As a result,

Chernatony and McWilliam (1989) used the symbolic and functional dimensions to create the Brand Box Model (Figure 1).

Figure 1 - Brand Box Model



Adapted from Chernatony and McWilliam (1989, p. 166)

Brands with high representationality and functionality provide functional excellence and are very good vehicles for non-verbal communication. In the opposite corner (brands with low representationality and functionality), it would be correct to talk about commodities. They are bought by customers when they are not particularly concerned about expressing something about themselves or with their functional needs. Therefore, it is a merely transactional relationship. Customers do not perceive the brand as providing significant value relative to other brands and do not experience personal connections with the brand. Brands with low representationality and high functionality are bought by customers in order to satisfy their utilitarian needs. On the other hand, brands with a high representationality and a low functionality are used by customers who are less concerned with satisfying functional needs and primarily concerned about using these brands as symbolic devices. Customers in a mainly functional relationship with the brand have a true relationship, which values convenience, performance and other functional attributes of brand. Whereas customers in a mainly representational relationship are motivated by attitudinal factors related to personal connections, beliefs

about brand motives, the role of the brand in self-definition and the importance of the relationship.

In a similar way, Dhar and Wertenbroch (2000) argue that customer take decisions based on utilitarian and hedonic criteria attached to a product and brands position themselves accordingly (Hartmann *et al.*, 2005). In this sense, utilitarian goods offer functional, instrumental and practical benefits to its customers, while hedonic goods offer aesthetic, experiential and enjoyment-related benefits (Pawle and Cooper, 2006). Broadly speaking, hedonic goods provide more experiential consumption, fun, pleasure, and excitement, whereas utilitarian goods are primarily instrumental and functional (Dhar and Wertenbroch, 2000). As a result, hedonic brands are primarily consumed for sensory gratification and affective purposes or for fun and enjoyment (Pawle and Cooper, 2006). Additionally, hedonic brands generate emotional arousal with benefits that are evaluated primarily on aesthetics, taste, symbolic meaning, and sensory experience (Hartmann *et al.*, 2005). According to Hwang and Kandampully (2012), a customer with an emotional connection with a brand demonstrates more involvement, leading to a more lasting relationship and a strong cognitive and affective perception of the brand in his/her mind. Conversely, utilitarian-motivated customers pursue products which fulfill necessary functions, and more logical and rational features related to transactions (Pawle and Cooper, 2006). This type of brands possesses a rational appeal and is less arousing as they generally provide cognitively oriented benefits. Consequently, brands which are viewed as mainly utilitarian are assessed primarily based on their perceived functional and instrumental benefits. Thus, reflecting relatively non-emotive, 'means-end' consumer decision-making processes (Hartmann *et al.*, 2005). Nevertheless, Okada (2005) remark that different products can be high or low in both hedonic and utilitarian attributes at the same time. Both hedonic and utilitarian brands may possess benefits that are hedonic or utilitarian in nature. In this way, a hedonic claim describes an affective benefit that satisfies hedonic needs for sensory pleasure, while a utilitarian claim concerns a pragmatic benefit. Therefore, in most situations, utilitarian consumption and hedonic consumption are both discretionary, and the difference between the two may be a matter of degree and perception (Dhar and Wertenbroch, 2000; Okada, 2005). Dhar and Wertenbroch (2000) demonstrate a fundamental asymmetry in how consumers trade off these dimensions in acquisition and

forfeiture choices. Their study shows an increase in the weight of the hedonic aspects in forfeiture choices. Other studies say that after meeting a specific level of functional attributes in the brand, the customer searches for hedonic dimension (Chitturi *et al.*, 2007).

In contrast, Sheth *et al.* (1991) develop a theory of customer choice, which is based on the value that customers perceive in the brand. Therefore, they identify five components of value: (i) functional value, which is the perceived utility from performance; (ii) social value that is the perceived utility from the brand's association with certain social groups; (iii) emotional value, which is the perceived utility from feelings aroused by the brand; (iv) epistemic value, the perceived utility from curiosity; and (v) conditional value that is the perceived utility as a result of a specific situation. Functional value represents the value derived from effective task fulfillment and is depicted by two dimensions: monetary value and convenience value. The monetary value is derived from the “product due to the reduction of its perceived short term and longer term costs” (Sweeney and Soutar, 2001, p. 211) and the convenience value is derived from the “perceived quality and expected performance of the product” (*op. cit.*, p. 211). Social value derives from the product or service use shared with others. As defined by Sweeney and Soutar (2001), social value is “the utility derived from the product’s ability to enhance social self-concept” (p. 211). Hence, social value is related to social approval and the enhancement of self-image among other individuals. The emotional value is acquired when a product/service stimulates feelings or sentimental states, such as enjoyment or fun. And the epistemic value is related to experienced curiosity, novelty or gained knowledge about a new product. The last type of value depends on the context in which the value judgment occurs and exists only within a specific situation. Therefore, conditional value is related to the concept of context that is based on the time, location and social environment, equipment available, technological environment and user specified criteria. Conditional value can be defined as “value existing in a specific context, where information that characterizes a situation related to the interaction between humans, applications, and the surrounding environment results in customized information according to the current location of the customer” (Pura, 2005, p. 517).

Therefore, the central idea is that customers establish relationships with brands not only because they provide functional benefits or because they like them. Customers tend to establish relationships with brands, because they also add value and meaning to their life (Fournier *et al.*, 1998; Fournier, 1998). Some of these meanings can be functional in nature, but others may be emotional because of the feelings that they provide (Brito, 2010). According to Brito (2010), despite the customer-brand relationship has a functional and emotional component, “there is a growing tendency for companies to strengthen the emotional tie” (p. 59). Companies seek to manage their brands in order to develop a relationship with the customer that goes beyond the purely transactional logic and functional satisfaction. The relevance of the emotional component in the relationship manifests itself in terms of the involvement of the customer with the brand. These brands create an empathic relationship in an attempt to understand the inspirations, aspirations and circumstances of customers’ lives, consequently they are able to generate feelings of community among them.

2.4 The relationship between brands and their customers in Social Media

In the current marketing environment, “sustaining a competitive advantage on the basis of product differentiation often is an exhausting race to a constantly shifting finish line” (McAlexander *et al.*, 2002, p. 51). Customers can literally encounter hundreds of brands in one single day, as a result is impossible for customers to develop deep, meaningful relationships with each of them (Fournier *et al.*, 1998; Keller, 2011). Consequently, the relationships that organizations are able to manifest between customers and their brands have become an important focus in marketing (Hamzah *et al.*, 2014; Hsieh and Wei, 2017; Saariluoma and Jokinen, 2014). Since relationships are, by definition, interactions over time, the essence of a relationship is some kind of interdependence between the entities involved (Fournier, 1998; Thomson *et al.*, 2005). In this sense, researchers have argued that it is important to consider how customers build brand relationships and form brand communities similar to how they build relationships and communities in their personal lives (Fournier, 1998; McAlexander *et al.*, 2002; Muniz and O’Guinn, 2001).

Moreover, Internet has fundamentally changed the way customers generate and obtain consumption-related information (Nisa and Whitehead, 2016; Yang *et al.*, 2016).

Therefore, proximity with the customer is the effort of the brand to encounter its customers and enable them to explore and interact with the brand (Schultz, 2007). In doing so, companies allow customers to be the true protagonists and the leading character of the customer-brand relationship (Brodie *et al.*, 2013). As a result, the current relational theory conceptualizes relationships as being highly experiential, interactive and inherently co-creative (Brodie *et al.*, 2011, 2013; Hollebeek, 2011a, 2011b; Sashi, 2012). Customers have now several Internet-based information sources, including social media platforms that allow sharing information with others. Consequently, marketers are increasingly interested in using brands to build strong and lasting relationships with customers and in investing in multiple online marketing channels, including social media and search engine advertising.

Social media can be defined as the “group of internet based applications that builds on the ideological and technological foundations of Web 2.0, and it allows the creation and exchange of user-generated content” (Kaplan and Haenlein, 2010, p. 61). By this way, brands can communicate with their different segments through online channels that allow to share and participate in a variety of activities (Murdough, 2009). Some of the most well-known social media networks include Facebook, Twitter and the popularity of social networks such as Facebook emphasizes the changes in media consumption (Nisa and Whitehead, 2016).

From a customer’s point of view and compared to traditional media, social media provide a platform for two-way dialogue between customers and brands (Yang *et al.*, 2016). Customers value social media as a communication medium far more than the traditional communication method (Nisa and Whitehead, 2016) and are not a listening audience anymore (Yang *et al.*, 2016). Instead of observers, they are initiators, participants, co-producers, co-creators always addressable and empowered. They interact not only with a brand but with other actors, such as customers and media (Maslowska *et al.*, 2016). These social interactions within a brand community provide opportunities for customers to experience product benefits, share those experiences, meet with the previously faceless and nameless people behind the brand, and learn more about the brand's heritage and values (McAlexander *et al.*, 2002). Through communities, customers share essential resources that can be cognitive, emotional or material in nature. Moreover, customers serve as brand missionaries and are motivated

to provide feedback. Additionally, they are more forgiving than others in regard to product failures or lapses of service quality. In the same way, social media provides a way to seek and discover new brands, compare alternative brands and read comments and reviews from other customers of the brand. Consequently, all of these interactions profoundly influence customers' relationship with and towards the brand, their perceptions and actions (Algesheimer *et al.*, 2005; McAlexander *et al.*, 2002; Nisa and Whitehead, 2016).

From the company's point of view, social media provide additional touchpoints with customers that encourage an ongoing interaction throughout the day. Hence, many brands have taken to social media networks to connect with customers, by using them to create valuable relationships before, during and after purchase (Nisa and Whitehead, 2016). Besides, these social interactions allow a rapid dissemination of the marketing message. Also allow companies to absorb customer evaluations of new offerings or competitive actions, and maximize opportunities to collaborate with customers (Algesheimer *et al.*, 2005; Nisa and Whitehead, 2016). Consequently, this type of relationship can deepen customer-brand relationships, help marketers uncover common themes in customer feedback, and persuade customers to engage with the brand (Murdough, 2009). Additionally, applications on social media can be used throughout the customer cycle and over the product cycle. Social media allows brands to discover exactly what customers are interested in and then use this information to tailor their products and services in order to meet those needs (Nisa and Whitehead, 2016). Thus, social media can optimize costs of sales, marketing and service, since it can be used to: (i) make people aware of the brand, (ii) encourage them to buy in an easily and conveniently way, (iii) identify and solve issues and dissatisfaction, (iv) support the design of new products and increase their speed to market; or (v) understand the functions and features that customers most like (Thorbjørnsen *et al.*, 2002). According to Ashley and Tuten (2015), marketers have several options within social media for branding. For instance, marketers can place paid display advertising, participate in social networks as a brand persona, develop branded engagement opportunities for customer participation within social networks, and publish brand-related content in social channels. Therefore, social media enables brands and companies to engage with

customers on their own terms and through their chosen channels (Stone and Woodcock, 2013).

Hence, research on brand relationships argues that customers engage in certain types of relationships with brands in the same way that engage in personal and intimate relationships with people (Aaker, 1997; Aaker *et al.*, 2001; Fournier, 1998; Keller and Lehmann, 2006). Consequently, the brand relationship process can generate cognitive and emotional benefits that result in a bond between the brand and the customer (Keller and Lehmann, 2006). Aaker (1997) stresses that brands, like people, have personality traits and identifies five main dimensions: sincerity, excitement, competence, sophistication and ruggedness. Subsequently, Aaker *et al.* (2001) conducted the same study in Spanish and Japanese markets and reached to different conclusions, showing that the initial typology is not of easy generalization. Fournier (1998) views brand-relationship as multi-faceted and consisting of six dimensions beyond loyalty or commitment along which customer-brand relationships vary: (i) self-concept connection, (ii) commitment or nostalgic attachment, (iii) behavioral interdependence, (iv) love/passion, (v) intimacy, and (vi) brand-partner quality. In addition, the author suggests the following typology of metaphors to represent common customer-brand relationships: (i) arranged marriages, (ii) casual friends/buddies, (iii) marriages of convenience, (iv) committed partnerships, (v) best friendships, (vi) compartmentalized friendships, (vii) kinships, (viii) rebounds /avoidance-driven relationships, (ix) childhood friendships, (x) courtships, (xi) dependencies, (xii) flings, (xiii) enmities, (xiv) secret affairs, and (xv) enslavements. These forms of relationship are not mutually exclusive; in fact, they can be different aspects or facets of one overall relationship. In the same way, despite this typology contained most positive relationships, customer-brand relationships can also have a range of possible negative and neutral moods. One relationship includes exchange and communal aspects. Exchange aspects involve economic factors and offer primarily utilitarian benefits, while communal aspects of a relationship involve feelings and transcend self-interest.

In this sense, customers are more likely to relate to brands with which they feel a greater affinity in terms of personality (Keller and Lehmann, 2006). Additionally, brand relationships may be the result of imagination or actual participation in brand communities (Fournier, 1998; McAlexander *et al.*, 2002; Muniz and O'Guinn, 2001).

The theoretical foundation of brand engagement on social media derives from Bourdieu's social capital theory, which stresses that social networks have value and are dependent of the network size and interactivity (Yang *et al.*, 2016). Additionally, research in psychology and information systems recognizes the importance of motivating engagement in virtual social contexts, such as online community networks. According to Thorbjørnsen *et al.* (2002), the two main applications that have the ability to develop strong customer-brand relationships are: personalized Web sites and customer communities. Personalized Web sites are "simply dynamic Web sites where each consumer can get personally tailored information through user profiles and identification" (*op. cit.*, p. 19). On the other hand, customer community is "basically a Web site with possibilities of communication between multiple parties" (*op. cit.*, p. 19). From a brand engagement perspective, it is easier to bind the customer to a brand in a brand community than in a personalized web site. The reason behind this is the fact that novices on Internet are not so motivated and familiar with the technical process and information details of Web sites as experienced users are (Thorbjørnsen *et al.*, 2002).

Online brand communities have attracted considerable attention from both academics and marketers, because of their capability of creating, maintaining and encouraging brand relationships (Hamzah *et al.*, 2014; Saariluoma and Jokinen, 2014). When an online brand community adopts a para-social approach to the understanding, connection, interaction, sensing, and cocreation of value in personenetwork, personeperson, and personeorganization relationships, the online community can incorporate the brand as the core of value (Hsieh and Wei, 2017). Therefore, companies are increasingly using online brand communities to cocreate value for themselves and their customers.

Nevertheless, little is known about how to approach social media in a way that maximizes engagement. Although marketers receive advice regarding the execution of message delivery in social media, they receive little guidance on how different message strategies will affect processing and engagement (Ashley and Tuten, 2015). The benefits of cultivating these types of relationships to a company are many and diverse. However, as companies continue to leverage social media to better reach and engage with customers, they frequently treat online customers communities (e.g. Facebook) and

other online marketing strategies (e.g. search engine advertising) as stand-alone elements, rather than part of an integrated system (Yang *et al.*, 2016).

2.5 Types of Brand Communities

According to some authors (e.g. Brodie *et al.*, 2013; Dholakia *et al.*, 2004; McAlexander *et al.*, 2002), brand communities are one of the most important platforms for customers' engagement behaviors. In the past, virtual brand communities used to emerged from customer initiatives, but now companies are also starting to create communities as part of brand management strategies (Gummerus *et al.*, 2012). As result, an increasing number of companies are using virtual brand communities for commercial purposes with the intent to build relationships with customer, get feedback and strengthen the brand.

Broadly, brand communities can be defined as a collective of people with a shared interest in a specific brand, creating a subculture around the brand with its own values, myths, hierarchy, rituals and vocabulary (Cova and Pace, 2006). In the brand community literature, it is possible to find two main streams of research: studies that focus in the exploration of the nature of brand communities (Muniz and O'Guinn, 2001; Schau and Muniz, 2002; Ouwersloot and Odekerken-Schröder, 2008), and studies that deal with the outcomes of customers' brands community engagement (McAlexander *et al.*, 2002; Algesheimer *et al.*, 2005).

Muniz and O'Guinn (2001) defined brand communities as "a specialized, non-geographically bound community, based on a structured set of social relationships among admirers of a brand" (p. 412). In addition, Muniz and O'Guinn (2001) assessed three core components of a brand community: consciousness of kind, shared rituals and traditions, and sense of moral responsibility. Consciousness of kind is the intrinsic connection that members feel towards one another and the collective sense of difference that separate themselves from outsiders. It is also the solid and strong connection of the members with the brand. All members share a way of thinking about things that is more than shared attitudes or perceived similarity; it is a shared knowing of belonging (Bagozzi and Dholakia, 2006). This portrays a triangular scheme brand-customer-customer (Muniz and O'Guinn, 2001) that later McAlexander *et al.* (2002) extended into four types of relationships: customer-brand, customer-product, customer-company and customer-customer. The second component (shared rituals and traditions)

perpetuates the community's shared history, culture, and consciousness (Muniz and O'Guinn, 2001). Through these social processes members create, diffuse, maintain and reinforce their own meaning of the community experience, which comprises a culture, and a set of behavioral norms, values, specific language, signs and symbols (Casaló *et al.*, 2007; Muniz and O'Guinn 2001). Rituals and traditions also help in the celebration of brand history and sharing brand-related stories (Casaló *et al.*, 2007). The last component (sense of moral responsibility) makes members of a community feel morally committed to its individual members and the community as a whole (Muniz and O'Guinn 2001). Consequently, they feel the duty or obligation to support members and integrate new members into the community. Likewise, old members support new members to enjoy a meaningful brand's consumption experience.

The core factor of a brand community is the brand and its fundamental peculiarity resides in the ability of members to interact with each other. Typically, customers in a brand community share their interests for a specific brand exchanging information and knowledge (McAlexander *et al.*, 2002). Ouwersloot and Odekerken-Schröder (2008) segmented brand community members into four categories based on consumption motivation. The first category is the "enthusiasts". They like of everything related to the brand and are pointed out as "the very *raison d'être* of brand communities". Secondly, the authors identified other type of members, the "users". These are members who limit their interest to the product and do not develop a broader interest in the brand. The third category is the "behind-the-scenes" and corresponds to the members who are not interested in the social dimensions of the community or product information. The last category is the members called "not-me". This kind of members is not dedicated to the brand, but they do not leave the community because of exit barriers or insufficient incentives. On the other hand, Schau and Muniz (2002) analyzed several brand communities and found four types of relationships between individual identity and community membership: (i) subsumed identity (members who partially or totally incorporate their identity in the community); (ii) super member (member who is evidenced by legitimacy and authority and an active and visible author identity); (iii) community membership as identity component (when the identity of the individual dominates membership in the community); and (iv) multiple memberships (when members have multiple community identities that merge into a physical self).

In contrast to these studies, the second stream of research examines the outcomes of customers' engagement within a brand community. According to Algesheimer *et al.*, (2005), customers who take part in brand communities have already a baseline relationship with the brand, which is further influenced by community participation. McAlexander *et al.* (2002) stress that brand communities increase customer loyalty and that transcendent customer experiences lead to stronger relationships with the brand, the product, the hosting company and other customers. In the same way, Algesheimer *et al.* (2005) showed that brand relationships lead to brand loyalty intentions, and that community engagement leads to membership continuance intentions. Although brand communities arise from strong emotional relationships that individuals have with brands, engagement behaviors can further reinforce and strength the brand relationship (Algesheimer *et al.*, 2005; Bagozzi and Dholakia, 2006; Gummerus *et al.*, 2012). Therefore, brand communities are important to both customer and managers. In addition, brand communities provide many benefits for the brand and marketers. For instance, they allow sharing information and keeping in touch with highly devoted customers (Andersen, 2005), and integrating customers into the brand identity (Andersen, 2005; McAlexander *et al.*, 2002). They also allow sharing experiences, strengthening the cultural norms and values of the brand (Muniz and O'Guinn, 2001).

Based on these investigations, Carlson *et al.* (2008) classified brand communities into two groups: psychological brand communities and social brand communities. Psychological brand community is "an unbound group of brand admirers, who perceive a sense of community with other brand admirers, in the absence of social interaction" (*op. cit.*, p. 285). Therefore, this conceptualization of brand community only exists in the mind of the individual. In contrast, social brand community is "a social community of brand admirers who acknowledge membership in the community and engage in structured social relations" (*op. cit.*, p. 284). Individuals of this community may never interact face-to-face with other members, but they still acknowledge membership and engage in some social interactions (e.g. communication online) in the community. In this sense, brand communities can be offline and online brand communities, small-group brand communities, brandfests and virtual social network brand communities (Zaglia, 2013).

Small-group brand communities are socio-centric with members showing a strong identity with their group and a strong identification with the brand (Bagozzi and Dholakia, 2006). Therefore, they create a parallel social universe with its own myths, values, rituals, vocabulary and hierarchy (Cova and Pace, 2006).

In a different manner, brandfests are “corporate sponsored events provided primarily for the benefit of current customers” (McAlexander and Schouten, 1998, p. 378) and celebration of brand ownership. According to the authors, brandfest is “the ideal servicescape in which to cultivate lasting relationships with customers” (*op. cit.*, p. 295). The extraordinary experiences will improve customers’ sense of appreciation and affection for the product. Activities consistent with their values will increase customers’ identification with the brand. Interactions will build mutual respect between the customers and the company. And, consequently, the entire positive experience will be perceived as added value. In this sense, brandfests are communities that only exist in the offline world.

A virtual social network brand community is a specialized, geographically dispersed community based on a structured and dynamic network of relationships among participants sharing a common focus (Dholakia *et al.*, 2004). In the same way, Sicilia and Palazón (2008) define virtual brand community as “a group of individuals with common interests in a brand who communicate each other electronically in a platform provided by the company which supports the brand” (p. 257). Online social networks platforms are “web-based services that allow individuals to (1) construct a public or semi-public profile within a bounded system, (2) articulate a list of other users with whom they share a connection, and (3) view and traverse their list of connections and those made by others within the system” (Boyd and Ellison, 2008, p. 211). Consequently, this type of platforms allow people with similar interests to gather together to communicate, exchange contact details, build relations, share stories and discuss ideas in written form or visually (e.g. pictures, videos). Hence, this sense of high customer knowledge and companionship can influence customer behavior between users of social networks (Zaglia, 2013) and can lead to the formation of meaningful relationships (Tsai and Men, 2013). Moreover, social networks can serve as a platform for customers to demand improvements in products, services and corporate policies (Tsai and Men, 2013). Despite the juxtaposition of brand and virtual community

concepts, Piller *et al.* (2005) stress the differences between the two. Brand communities are often supported by internet-based technology, but the concept is broader and encompasses everyone who feels connected to the brand, online or offline. Conversely, virtual communities are only defined in the virtual world.

The last decade has witnessed a proliferation of this type of virtual social platforms, resulting from the massive adoption of advances in internet, blogs and micro blogging (e.g. Twitter), bookmarking sites (e.g. del.icio.us), video sites (e.g. YouTube), virtual worlds (e.g. Second Life), social networking sites (e.g. Facebook, MySpace and LinkedIn) and mobile technologies (Laroche *et al.*, 2012; Sashi, 2012; Wirtz *et al.*, 2013). Consequently, many customers use and rely on Internet to search, exchange and share ideas and information, particularly the generation Y³ that lived their entire lives in the digital environment (Bolton *et al.*, 2013).

Customer engagement can take place in an offline or online environment (Greve, 2014). Online world offers ways to communicate and socialize which cannot be replaced by an offline medium, because social media provides customers the opportunity not only to engage but also to discuss and interact in discussion forums, blogs or social media platforms. Among the various types of online social platforms, social networking sites are considered the main driving force for CBE, because they are relationship centric and inherently participatory (Lee *et al.*, 2011; Tsai and Men, 2013; Dessart *et al.*, 2015). Peer-to-peer interactions occurring in these social networks are considered beneficial to the company, but also important to the customer: community members can create and co-create value for themselves, other members, visitors and/or organizations (Brodie *et al.*, 2013). Additionally, they give companies the chance to engage their current and potential customers (Greve, 2014). Emerging as a major phenomenon (Casaló *et al.*, 2007), social networking sites allow strengthening customer relationships and engagement (Algesheimer *et al.*, 2005). In particular Facebook has been embraced by brands as a key marketing channel to drive engagement and brand awareness (Brodie *et al.* 2013; Dessart *et al.* 2015, 2016; Malhotra *et al.*, 2013; Marbach *et al.*, 2016). For example on Facebook, among other things, any company can set up a fan page that enables users to communicate with both the company and other

³ Bolton *et al.* (2013) define Generation Y as the group of “people born between 1981 and 1999 – regardless of their circumstances” (p. 246).

users of the brand (Yang *et al.*, 2016). Many of these fan pages have millions of members who interact on a daily basis and share brand and personal experience through these pages (Hassan and Ariño, 2016). For instance, Marbach *et al.* (2016) stress that customers with high need for new experiences tend to engage with Facebook brand pages and its users at a higher level. Consequently, they use these brand pages to get to know other individuals that might share the same interests.

Although each virtual social network brand community has a unique purpose, ultimately they represent an explicit marketing investment on behalf of the company that wants to develop long-term connections (Baldus *et al.*, 2015; Dessart *et al.*, 2016). Consequently, the engagement of the customer largely depends on what companies allow and what technology enables (Greve, 2014; Hsieh and Wei, 2017; Nisa and Whitehead, 2016).

2.6 Conclusion

Brands are not a passive object of marketing transactions; they are an active object that contributes to the relationship with the customer. The relationship can be based on functional or representational attributes of brand (Chernatony and McWilliam, 1989; and Chernatony, 1993) or even based on the value that customer perceives in the brand (Sheth *et al.*, 1991). Although the model of Sheth *et al.* presents a more detailed categorization, the model of Chernatony and McWilliam is more pragmatic and easy to implement (Chernatony, 1993).

In establishing the connection between customers and brand, personalized Web sites and customer brand communities are among the most common applications. Both are assumed to be promising tools for building strong customer-brand relationships. However, when the customer Internet experience is taken into-account, brand communities have a stronger impact on the development of customer-brand relationships.

Brand communities can exist on the offline and online world. On the Internet, brand communities are no longer restricted to geographic co-presence of members and interaction takes place through a technological interface, such as online social networks (e.g. Facebook, Twitter). Consequently, virtual brand communities overcome the geographical limitations that have restricted the development of offline brand

communities. In addition, the absence of physical contact between members can change the social context and relationships.

As a result, virtual social network brand communities allow strengthening customer relationships, which can foster customers to engage with their brands. In particular, Facebook is the preferred social networking site for customers to engage with brand (Brodie *et al.* 2013; Dessart *et al.*, 2015, 2016; Malhotra *et al.*, 2013). Despite their importance in fostering customer-brand relationships, little is known about how different strategies affect customer engagement process and how to maximize engagement through brand communities. In the nexts sections (Section 3 and 4), the concept of customer brand engament and its dimensions, as well as its potential drivers are discussed in detail.

3. Customer Brand Engagement

3.1 Introduction

As engagement is the focal theme of this thesis, consequently this section is completely dedicated to the understanding of its definition, dimension, process and potential moderators.

Section 3 starts with a brief literature review of the current uses of the concept in different academic fields, namely in the fields of sociology, psychology and organizational behavior (Section 3.2). In the following subsections, it is presented a literature review of the customer engagement concept in marketing literature (Section 3.3), as well as engagement measurement scales (Section 3.4), characteristics of the customer engagement process and its moderators (Section 3.5). The last section (Section 3.6) is dedicated to conclusions.

3.2 Conceptual foundation of engagement

First conceptualized by Kahn (1990), engagement was defined as “behaviors by which people bring in or leave out their personal selves during work role performances” (p. 694). While, personal disengagement is “the uncoupling of selves from work roles; in disengagement, people withdraw and defend themselves physically, cognitively, or emotionally during role performances” (*op. cit.*, p. 694). Hence, for Kahn (1990), engagement means to be psychologically present when occupying and performing an organizational role.

Since then, the term began to emerge as a psychological state (e.g., involvement, commitment, attachment, mood), performance construct (effort or observable behavior), disposition or some combination of the above (Macey and Schneider, 2008). For example, Schaufeli *et al.* (2002) define engagement “as a positive, fulfilling, work-related state of mind that is characterized by vigor, dedication, and absorption” (p. 74). In addition, they stress that engagement is a “persistent and pervasive affective-cognitive state that is not focused on any particular object, event, individual, or behavior” (*op. cit.*, p. 74), instead of a momentary and specific state. While, for Maslach *et al.* (2001), engagement is characterized by energy, involvement, and efficacy and is distinct from established constructs in organizational psychology, such as organizational commitment, job satisfaction or job involvement.

Additionally, several researchers have attempted to define engagement, either generally or in a context. To date, the main fields of investigation were: sociology, psychology and organizational behavioral.

In sociology and psychology, engagement is expressed as civic engagement, social engagement and community engagement. Civic engagement is defined by Adler and Goggin (2005) as the set of “the interactions of citizens with their society and their government” (p. 241). More specifically, Diller (2001) defined civic engagement as “an individual’s duty to embrace the responsibilities of citizenship with the obligation to actively participate, alone or in concert with others, in volunteer service activities that strengthen the local community” (p. 21). In the same way, social engagement is defined by Berkman *et al.* (2000) as community involvement such as belonging to neighborhood groups, religious groups or non-governmental organizations. Social engagement results from the enactment of potential social ties, getting together with friends, attending social functions, participating in occupational or social roles and performing meaningful leisure or productive activities. Community engagement involves arrangements for citizens and communities to participate in the processes used to make policies, programs and services (Maistry and Thakrar, 2012). In this sense, community engagement is the process of collaboratively working together to address issues affecting the well-being of the community that can be defined as a group of people affiliated by geographic proximity, special interest or similar situations.

These definitions emphasized engagement as the voluntary participation of an individual acting independently or participating in a group (Adler and Goggin, 2005). Other studies (e.g. Tamarack, 2007) view the concept of engagement as a process of working collaboratively with relevant partners who share common goals and interests. This implies that engagement goes beyond participation and also includes involvement and the building of authentic partnerships.

In educational psychology, Glanville and Wildhagen (2007) recognize that there is an ongoing debate about the conceptualization and measurement of engagement. In their study the authors end up concluding that “engagement should be measured as a multidimensional concept” (p. 1019) that comprises a behavioral and psychological dimension. Horstmanshof and Zimitat (2007) also acknowledge these two dimensions of engagement. According to them, behavioral engagement refers to students’ academic

application, in terms of consistency in study and seeking advice, and time spent on studying out of class. While psychological engagement refers to the value that students place on learning. On the other hand, others authors (e.g. Fredricks *et al.*, 2004; Glanville and Wildhagen, 2007) express engagement in three dynamically related dimensions: cognitions, emotions and behaviors. The cognitive dimension can be divided into two components: psychological and cognitive (Fredricks *et al.*, 2004). The psychological component includes motivational goals and self-regulated learning, whereas the psychological component refers to the students' personal investment in learning and motivation to learn. The emotional dimensional is related to the sense of identification, emotional reaction and connection with school, staff, students, academics or institution (Fredricks *et al.*, 2004). In this sense, it comprises the students' attitudes, interests, values and positive or negative feelings towards the institution and instructors (Glanville and Wildhagen, 2007). Finally, the behavior dimension consists in the students' involvement with academic and social activities (Fredricks *et al.*, 2004). The behaviors can be categorized into three types: positive conduct, involvement in learning and participation in school related activities.

For London *et al.* (2007), engagement refers “not only to the academic investment, motivation, and commitment that students demonstrate within their institution (both in and out of the classroom context), but also to the psychological connection, comfort, and sense of belonging that students feel towards their institution, their peers, professors and administrators” (p. 456). Additionally, the authors refer that engagement encompasses institutional (policies, regulations, and structures within the academic system), situational (the pedagogical practices of the professor and the culture of competition versus collaboration in the institution) and individual factors (competence beliefs, concerns and expectations), which can have different impacts on students. These factors can work independently or synergistically, creating a network of potential sources of disengagement and windows of opportunities for interventions. In this sense, engagement is a multidimensional concept that includes academic investment, academic motivation, commitment to the institution, perceived psychological connection to institution, comfort with institution and sense of belonging to institution.

In organizational behavior, engagement is understood as “the direct opposite of burnout and exist on a continuum—with engagement on one end and burnout on the

other” (Simpson, 2009, p. 1019). Moreover, it is characterized by high energy levels, high involvement and high efficacy. When considering a context, engagement is mainly studied in three lines of research that has focused on personal engagement, engagement within the employee work role and work engagement.

The definition of personal engagement is built upon Kahn (1990) conceptualization that defined personal engagement as “the harnessing of organization members' selves to their work roles; in engagement, people employ and express themselves physically, cognitively, and emotionally during role performances” (p. 694). In this sense, posterior studies had focused their attention in the identification and investigation of the personal engagement antecedents. Simpson (2009) identified four psychological conditions with an impact at the individual’s personal engagement: meaningfulness, safety, availability and presence. As a result, tasks, roles and interactions are identified as meaningfulness influences. Other important influences are interpersonal relationships, groups and intergroup dynamics, management styles, organizational norms, physical energies, emotional energies, insecurity and outside life.

Regarding engagement within the employee work role, it occurs when individuals are emotionally connected to others and cognitively vigilant (Simpson, 2009). However, the conceptual overlap between the construct itself and its antecedents has limited the understanding of the concept. For example, Harter *et al.* (2002) defined employee engagement as “the individual’s involvement and satisfaction as well as enthusiasm for work” (p. 269). Consequently, when the authors try to measure the variable of interest (i.e., employee engagement), they end up using constructs that are understood to be its antecedents (involvement and satisfaction).

Finally, work engagement is defined as a positive, fulfilling, work-related state of mind that is characterized by vigor, dedication and absorption (Schaufeli *et al.*, 2002; González-Romá *et al.*, 2006). Vigor is characterized by high levels of energy and mental resilience, willingness to invest efforts and persistence to face difficulties (González-Romá *et al.*, 2006). Dedication is characterized by “a sense of significance, enthusiasm, inspiration, pride and challenge” (*op. cit.*, p. 166). Absorption is characterized by fully concentration on the work, “where time passes quickly and one has difficulty detaching oneself from work” (*op. cit.*, p. 166). Therefore, engagement is understood as a “persistent and pervasive affective-cognitive state that is not focused on

any particular object, event, individual or behavior” (Simpson, 2009, p. 1019). Therefore, work engagement is characterized by high levels of energy, mental resilience, persistence, being strongly involved, concentrated and happily engrossed in one activity.

3.3 Definitions of the concept of CBE

In marketing, the customer engagement literature has its foundations within relationship marketing theory and draws on the theory of interactive experiences (Brodie *et al.*, 2011). These theories were first explored by the Nordic school and then as a part of the service dominant logic (Marbach *et al.*, 2016). Since 2005, the academic marketing literature has been using the term, sometimes without clarity and consensus regarding definition, form, dimensionality and operationalization of engagement. As point out by Hollebeek (2011a), not only do different academics address engagement concept from different approaches and methods, but they have expressed inevitable differences of opinion over its nature.

More specifically, Gambetti and Graffigna (2010) identify four different approaches on how engagement is viewed. According to them, the engagement concept has been conceptualized as a form of interaction between the employee and the customer, an alliance between the company and the customer, a co-production of contents between the company and the customer, and last but not least, as a top management effort towards its employees.

Bowden (2009) describes engagement as a “psychological process that models the underlying mechanisms by which customer loyalty forms for new customers of a service brand as well as the mechanisms by which loyalty may be maintained for repeat purchase customers of a service brand” (p. 65). On the other hand, van Doorn *et al.* (2010) and Pham and Avnet (2009) focus on specific engagement behaviors. For van Doorn *et al.* (2010), customer engagement behaviors can be defined as “customer’s behavioral manifestations that have a brand or company focus, beyond purchase, resulting from motivational drivers” (p. 254), while Pham and Avnet (2009) defined engagement as a “motivational state related to involvement and absorption of attention (...) to be inferred from a pattern of action or withdrawal with respect to the target object” (p. 2). Kumar *et al.* (2010) agree with these last two definitions. However, they argue that engagement “would be incomplete without the inclusion of customer

purchases from the firm” (p. 298). Moreover, Mollen and Wilson (2010) characterize online engagement as a “cognitive and affective commitment to an active relationship with the brand as personified by the website or other computer mediated entities designed to communicate brand value” (p. 923). This definition comprises the dimensions of “sustained cognitive processing,” “instrumental value” (i.e., utility and relevance), and “experiential value” (i.e., emotional congruence with the narrative schema encountered in computer-mediated entities).

By contrast, authors such as Brodie *et al.* (2011, 2013), Dwivedi (2015), Greve (2014) and Hollebeek (2011a,b, 2014) stress the importance of a definition of engagement that comprises the cognitive, emotional and behavior dimensions. Hollebeek (2011a) identifies six key tenets of the CBE: (i) individual, (ii) motivational, (iii) context-dependent, (iv) emerges from two-way interactions between subject and object, (v) as an outcome may exist at different intensities and (vi) as a process can developed over time. As a result, the author defines CBE as “the level of an individual customer’s motivational, brand-related and context-dependent state of mind characterized by specific levels of cognitive, emotional and behavioral activity in direct brand interactions” (Hollebeek, 2011a, p. 790). Additionally, Brodie *et al.* (2011) stress that the customer engagement state “occurs within broader, dynamic processes typified by the co-creation of value” (p. 257), which distinguish engagement from the concepts of participation and involvement.

Thus, engagement plays the central role in the process of relational exchange and the other relational concepts (e.g. participation, involvement, loyalty) act as engagement antecedents and/or consequences. In this sense, Brodie *et al.* (2011, p. 260) provide the following general definition of customer engagement:

“Customer engagement (CE) is a psychological state that occurs by virtue of interactive, co-creative customer experiences with a focal agent/object (e.g., a brand) in focal service relationships. It occurs under a specific set of context dependent conditions generating differing CE levels; and exists as a dynamic, iterative process within service relationships that co-create value. CE plays a central role in a nomological network governing service relationships in which other relational concepts (e.g., involvement, loyalty) are antecedents and/or consequences in iterative CE processes. It is a multidimensional concept subject to a context- and/or stakeholder-specific expression of relevant cognitive, emotional and/or behavioral dimensions.”

In a context of a virtual brand community, Brodie *et al.* (2013) reinforce this definition by emphasizing that consumer engagement involves “specific interactive experiences between consumers and the brand, and/or other members of the community” (p. 107). In the same way, Vivek *et al.* (2012) defines customer engagement as the “intensity of an individual’s participation in and connection with an organization’s offerings or organizational activities, which either the customer or the organization initiates” (p. 133). In this conceptualization, the cognitive and affective elements of customer engagement incorporate the experiences and feelings of customers, while the behavioral and social elements capture the participation by current and potential customers.

Recently, Hollebeek *et al.* (2014) conceptualize CBE as “a consumer's positively valence brand-related cognitive, emotional and behavioral activity during or related to focal consumer/brand interactions” (p. 154). In this sense, they derive and validate three CBE dimensions: cognitive processing (cognitive CBE dimension), affection (emotional CBE dimension) and activation (behavioral CBE dimension). Cognitive processing is defined as “a consumer’s level of brand-related thought processing and elaboration in a particular consumer/brand interaction” (Hollebeek *et al.*, 2014, p. 154). Affection refers to “a consumer's degree of positive brand-related affect in a particular consumer/brand interaction” (*op. cit.*, p. 154). And, finally, activation states the “consumer's level of energy, effort and time spent on a brand in a particular consumer/brand interaction” (*op. cit.*, p. 154). As a result, CBE appears as a multi-dimensional concept (Vivek *et al.*, 2014). In the same way, Greve (2014) defines customer engagement as “a psychological process of the customer that leads to the formation of loyalty”, “a customer’s behavioral manifestation towards a brand or a firm, beyond purchase, resulting from motivational drivers” and “a psychological state that is characterized by a degree of vigor, dedication, absorption, and interaction” (p. 203).

Another recent conceptualization of CBE is done by Dwivedi (2015). Dwivedi (2015) derives a conceptualization of CBE from the domain of organizational psychology and defines CBE as “consumers' positive, fulfilling, brand-use- related state of mind that is characterized by vigor, dedication and absorption” (p. 100). In this context, vigor symbolizes the high levels of energy and mental resilience of the customer when he/she is interacting with a brand, as well as the customer willingness

and ability to invest effort in such interactions. Dedication denotes a sense of significance, enthusiasm, inspiration, pride and challenge, while absorption corresponds to the sense of being fully concentrated and happily engrossed in brand interactions. Each of these dimensions corresponds to the behavioral, emotional and cognitive aspects of CBE already identified by Brodie *et al.* (2011), Hollebeek (2011a, 2011b) and Hollebeek *et al.* (2014). Following the approach of engagement as a multidimensional concept, Dessart *et al.* (2015, 2016) confirm the three main aspects of CBE (affective, cognitive and behavioral) and divide them into seven sub-dimensions: enthusiasm, enjoyment, attention, absorption, sharing, learning and endorsing. In this study, the affective dimension comprises the emotions experienced by customers regarding their engagement focus: customer's intrinsic level of excitement and interest (enthusiasm) and customer's feeling of pleasure and happiness derived from interaction (enjoyment). The cognitive dimension corresponds to the set of enduring and active mental states that a customer experiences regarding the focal objects of engagement: the cognitive availability and amount of time spent actively thinking and being attentive (attention) and the level of customer's concentration and immersion (absorption). Lastly, the behavioral dimension results from motivational drivers: the act of providing (sharing) and actively or passively seeking (learning) content, information, experience, ideas or other resources, and the act of sanctioning, showing support, referring (endorsing).

3.4 Engagement measurement scales

Despite being sparse, the empirical research on how engagement should be measured suggests to measure engagement using a variety of data collection techniques. According to O'Brien and Toms (2010), the most common measure is the self-report. Self-report measures allow assessing the user's perspective of an experience. However, these measures are not so objective as performance and physiological measures are. For example, Sprott *et al.* (2009) develop and test a scale to measure brand engagement as a form of self-brand connection (Table 1). In this study, engagement is used as a synonym of brand involvement; consequently little importance is attributed to the cognitive and behavioral dimensions of engagement.

Table 1 – Sprott *et al.* scale, items used to measure brand engagement in self-concept

Scale items
I have a special bond with the brands that I like
I consider my favorite brands to be a part of myself
I often feel a personal connection between my brands and me
Part of me is defined by important brands in my life
I feel as if I have a close personal connection with the brands I most prefer
I can identify with important brands in my life
There are links between the brands that I prefer and how I view myself
My favorite brands are an important indication of who I am

Source: Sprott *et al.* (2009, p. 93)

On the other hand, Calder *et al.* (2009) designed the online engagement scale, where engagement is conceptualized as “a second-order construct that is manifested in various first-order ‘experience’ constructs” (p. 322). In this sense, the customer engagement is understood as a collection of experiences with a particular object, which in the case of Calder *et al.* (2009) study is a website. The scale is based on eight-dimensions of experience that comprise stimulation and inspiration; social facilitation; time; self-esteem and civic mindedness; intrinsic enjoyment; utilitarian; participation and socializing; and sense of community (Table 2). As a result, the notion of interactive between the customer and the brand exists as an independent dimension.

Table 2 – Calder *et al.* scale, items used to measure online engagement

Stimulation and Inspiration	It inspires me in my own life
	This site makes me think of things in new ways
	This site stimulates my thinking about lots of different topics
	This site makes me a more interesting person
	Some stories on this site touch me deep down
Social Facilitation	I bring up things I have seen on this site in conversations with many other people
	This site often gives me something to talk about
	I use things from this site in discussions or arguments with people I know
Temporal	It's part of my routine
	This is one of the sites I always go to anytime I am surfing the web
	I use it as a big part of getting my news for the day
	It helps me to get my day started in the morning
Self-Esteem and Civic Mindedness	Using this site makes me feel like a better citizen
	Using this site makes a difference in my life
	This site reflects my values
	It makes me more a part of my community
	I am a better person for using this site

Intrinsic Enjoyment	It's a treat for me
	Going to this site improves my mood, makes me happier
	I like to kick back and wind down with it
	I like to go to this site when I am eating or taking a break
	While I am on this site, I don't think about other sites I might go to
Utilitarian	This site helps me make good purchase decisions
	You learn how to improve yourself from this site
	This site provides information that helps me make important decisions
	This site helps me better manage my money
	I give advice and tips to people I know based on things I've read on this site
Participation and Socializing	I do quite a bit of socializing on this site
	I contribute to the conversation on this site
	I often feel guilty about the amount of time I spend on this site socializing
	I should probably cut back on the amount of time I spend on this site socializing
Community	I'm as interested in input from other users as I am in the regular content on this site
	A big reason I like this site is what I get from other users
	This site does a good job of getting its visitors to contribute or provide feedback
	I'd like to meet other people who regularly visit this site
	I've gotten interested in things I otherwise wouldn't have because of others on this site
	Overall, the visitors to this site are pretty knowledgeable about the topics it covers so you can learn from them

Source: Calder *et al.* (2009, p. 325)

In the psychometric study of Tait *et al.* (2002), engagement with a service (in this case a mental health services) can be understood as a set of processes that build a trusting relationship between the provider (mental health care professionals) and the customer (client). Therefore, the scale was developed based on the following domains: (i) availability, which refers to the client being available for arranged appointments; (ii) collaboration, which refers to the client actively participating in the management of illness; (iii) help seeking, which refers to the client seeking help when needed; and (iv) treatment adherence, which refers to the client's attitude towards taking medication (Table 3). In doing so, the scale incorporated four behavior aspects of engagement, leaving aside the cognitive and affective aspects of the relationship.

Table 3 – Tait *et al.* scale, items used to measure engagement with mental health services

Availability	The client seems to make it difficult to arrange appointments
	When a visit is arranged, the client is available a
	The client seems to avoid making appointments
Collaboration	If you offer advice, does the client usually resist it?
	The client takes an active part in the setting of goals or treatment plans a
	The client actively participates in managing his/her illness a
Help seeking	The client seeks help when assistance is needed a
	The client finds it difficult to ask for help
	The client seeks help to prevent a crisis a
	The client does not actively seek help
Treatment adherence	The client agrees to take prescribed medication a
	The client is clear about what medications he/she is taking and why a
	The client refuses to co-operate with treatment
	The client has difficulty in adhering to the prescribed medication

Source: Tait *et al.* (2002, p. 198)

In contrast with the previous scales, some authors chose to develop three-dimensional scales. In the organizational behavior field, Schaufeli *et al.* (2002) developed a scale, which measures the three dimensions include in their definition of work engagement. According to them, engagement is defined as “positive, fulfilling, work-related state of mind that is characterized by vigor, dedication, and absorption” (p. 74). This scale has been validated in several countries (Table 4). However, some studies have failed to find support for the three-factor structure (vigor, dedication and absorption), as for example Sonnentag (2003) and Halberg and Schaufeli (2006).

Table 4 - Schaufeli *et al.* scale, items used to measure work engagement

Vigor	When I get up in the morning, I feel like going to work.
	At my work, I feel bursting with energy.
	At my work I always persevere, even when things do not go well.
	I can continue working for very long periods at a time.
	At my job, I am very resilient, mentally.
	At my job I feel strong and vigorous.
Dedication	To me, my job is challenging.
	My job inspires me.
	I am enthusiastic about my job.
	I am proud on the work that I do.
	I find the work that I do full of meaning and purpose.
Absorption	When I am working, I forget everything else around me.
	Time flies when I am working.
	I get carried away when I am working.

Source: Schaufeli *et al.* (2002, p. 89)

Base on this scale, Dwivedi (2015) derived a model for CBE. Adapting the concept of work engagement and examining its factorial validity in a customer-brand relationship context, Dwivedi (2015) developed a CBE scale, where CBE is characterized by vigor, dedication and absorption (Table 5):

Table 5 - Dwivedi scale, items used to measure customer brand engagement

Vigor	I feel strong and vigorous when using brand X
	I am passionate about using brand X
	When interacting with brand X, I feel full of energy
	I can continue using brand X for very long periods
	I would like to stick with brand X despite some problems with it
	When I get up in the morning, I feel like using brand X
Dedication	I feel enthusiastic when interacting with brand X
	I am proud of brand X
	Brand X inspires me
	Brand X gives me meaning and purpose
	I use brand X with complete dedication
Absorption	I get carried away when I interact with brand X
	I am usually absorbed when using brand X
	When I am using brand X,I forget everything else
	It is difficult to detach myself when I am using brand X
	I feel happy when I am interacting with brand X
	Time flies when I am interacting with brand X

Source: Dwivedi (2015, p. 105)

On the other hand, May *et al.* (2004) developed a measure of engagement to reflect the three components (cognitive, emotional and physical) of Kahn's definition of engagement. However, after conducting an exploratory principal components and factor analysis, the authors concluded that the initial items did not result in three separate and reliable scales representing cognitive, emotional and physical engagement. As result, they used an overall measure of engagement made up of the average of 13 items that demonstrated good reliability (Table 6).

Table 6 - May *et al.* scale, items used to measure work engagement

Cognitive	Performing my job is so absorbing that I forget about everything else
	I often think about other things when performing my job
	I am rarely distracted when performing my job
	Time passes quickly when I perform my job
Emotional	I really put my heart into my job
	I get excited when I perform well on my job
	I often feel emotionally detached from my job
	My own feelings are affected by how well I perform my job.
Physical	I exert a lot of energy performing my job
	I stay until the job is done
	I avoid working overtime whenever possible
	I take work home to do
	I avoid working too hard

Source: May *et al.* (2004, p. 36)

In the marketing literature, besides the scale of Dwivedi (2015), so far only two studies set a three-dimensional scale to measure CBE: the studies of Hollebeek *et al.* (2014) and Vivek *et al.* (2014). Hollebeek *et al.* (2014) scale takes a three-dimensional view of CBE that comprises an emotional, an affective and a behavioral dimension. The model reflects customer engagement with specific brands and the notion of interactive customer-brand relationship encompasses each of the three dimensions of CBE. The scale is composed by 10 items (Table 7). Despite being designed to have applicability to across a range of settings and brands, the validation and application of scale was limited to the investigation of particular social media settings (Facebook, Twitter and LinkedIn). Later, the scale was validated by Leckie *et al.* (2016) in the context of Australian mobile phone service providers and by Yang *et al.* (2016) in a context of social media (Facebook) and online advertising.

Table 7 – Hollebeek *et al.*, 10-item scale used to measure customer brand engagement

Cognitive Processing	Using [brand] gets me to think about [brand]
	I think about [brand] a lot when I'm using it
	Using [brand] stimulates my interest to learn more about [brand]
Affection	I feel very positive when I use [brand]
	Using [brand] makes me happy
	I feel good when I use [brand]
	I'm proud to use [brand]
Activation	I spend a lot of time using [brand], compared to other [category] brands
	Whenever I'm using [category], I usually use [brand]
	[Brand] is one of the brands I usually use when I use [category]

Source: Hollebeek *et al.* (2014, p. 156)

Vivek *et al.* (2014) view customer engagement as a three-dimensional concept that includes conscious attention, enthused participation and social connection. The final 10-item scale was validated with focus on the Apple brand and retailing (Table 8). Additionally, the nomological validity of the scale was addressed using four outcomes: value perceptions, benevolence perceptions, future patronage intent and affective commitment towards the organization.

Table 8 – Vivek *et al.*, 10-item scale used to measure customer engagement

Conscious Attention	Anything related to _____ grabs my attention.
	I like to learn more about _____.
	I pay a lot of attention to anything about _____.
Enthused Participation	I spend a lot of my discretionary time _____.
	I am heavily into _____.
	I am passionate about _____.
	My days would not be the same without ____.
Social Connection	I love _____ with my friends.
	I enjoy _____ more when I am with others.
	_____ is more fun when other people around

Source: Vivek *et al.* (2014, p. 412)

Although Hollebeek *et al.* (2014) and Vivek *et al.* (2014) view engagement as a multi-dimensional, they do not account for other engagement foci. Consequently, scales are not easily applicable to other foci of engagement (Dessart *et al.*, 2016; Yang *et al.*, 2016).

3.5 Process and Moderators

Customer engagement process does not follow an orderly sequential progression of phases over time (Brodie *et al.*, 2011, 2013). In reality, it is an interaction of relevant sub-processes, a series of aggregated engagement states. Thus, the engagement behavior has a valence, a form or modality, a scope, an impact and a purpose (Dessart *et al.*, 2016; Maslowska *et al.*, 2016; van Doorn *et al.*, 2010; Vivek *et al.*, 2014).

According to van Doorn *et al.* (2010), the valence refers to the customer's actions that can be positive or negative in terms of content. Hollebeek and Chen (2014) posit that positive valence may center on favorable or affirmative cognitive, emotional and behavioral brand-related dynamics during specific brand interactions, while negative valence is exhibited through customers' unfavorable brand-related thoughts, feelings and behaviors during focal brand interactions. However, Villiers (2015) stresses that the valence of CBE "is more than simply negative, neutral or positive" (p. 1955). The valence depends on the salience of the service experience or brand interface at a point in time. Consequently, customers may express positive engagement with some aspects of the brand/product/service, while simultaneously being disengaged and/or having outright negative cognitive or negative affective engagement towards others aspects.

In this sense, the form and modality refers to the different ways in which it can be expressed by customers. So, according to van Doorn *et al.* (2010), it is possible to find three types: (i) in-role behavior that occurs within parameters defined by the company; (ii) extra-role behavior, which are optional activities that customers can choose to engage in; and (iii) elective behavior, activities that customers engage in to achieve their consumption goals. In the same way, Maslowska *et al.* (2016) stress that engagement is a continuum of resources invested by individuals, which can be described on two dimensions: interactivity and brand-related personal-goal-relevance. The more interactive the behavior becomes, the more customers show initiative. Consequently, the more resources customers invest in the behavior, the more engaged they are. On the other hand, the second dimension describes to what degree the behavior helps a customer attain his/her goal.

Regarding temporal and geographic scope, engagement can be temporally momentary or ongoing, and local or global. Consequently, the engagement process can range from short-term to long-term and/or relatively stable to highly variable, which

may generate varying levels of engagement intensity and complexity over time (Brodie *et al.*, 2011). In this sense, Maslowska *et al.* (2016) argue that the continuum of engagement range from “lower engagement” to “higher engagement”. “Lower engagement” describes situations in which customers passively consume content or use very basic forms of feedback, while “higher engagement” describes circumstances in which customers actively process the role of the brand in their lives or participate in various forms of co-creation.

Thus, the impact can be conceptualized in terms of the immediacy, intensity, breadth and the longevity of the impact (van Doorn *et al.*, 2010). And, the customer’s purpose involves the connection that individuals form with companies, based on their experiences with the offerings and activities of the company (Vivek *et al.*, 2012).

Therefore, the customer role is an inherent component of CBE (Gambetti *et al.*, 2015). Thus, different backgrounds and personalities of the customers can influence the CBE process (Algesheimer *et al.*, 2005). For the reason that contexts and personalities generate positive or negative affective states that influence customer’s attitudes towards the brand and company (Nambisan and Baron, 2007). Additionally, not all members of the virtual social network brand communities are a brand’s fan. Some of them are only looking for information (Andersen, 2005). Therefore, it is necessary to take account of the individual-level factors that can directly and indirectly influence CBE (Algesheimer *et al.*, 2005; Bolton *et al.*, 2013; van Doorn *et al.*, 2010).

In this sense, it is possible to identify two types of individual-level factors: stable and dynamic factors. Stable factors are related to socio-economic status, personal values, preferences, age and lifecycle, while dynamic factors are associated with actual and perceived characteristics of the brand and brand reputation (van Doorn *et al.*, 2010). Fournier (1998) highlights five broad sociocultural contexts regarding customers’ relationship attitudes and behaviors: age, lifecycle, gender, family/social network and culture. These factors influence the strength of relationship, the type of relationship desired, the nature and experience of emotional expression, the style of interaction, the ease with which relationships are initiated and terminated, and the degree to which enduring commitments are required. For instance, previous research suggests that women exhibit more and stronger interpersonal relationships and brand involvements comparing to men. In the same way, variations in age and lifecycle influence

relationship behaviors, in terms of interpersonal and customer behavior. Researchers state that women have a higher preference of social networking (Kuss and Griffiths, 2011; Salehan and Negahban, 2013), because women are more socially oriented than men are (Lee *et al.*, 2014). Additionally, women have the ability to transform brand commodities into symbolic markers of cultural categories (Fournier, 1998). In this sense, Fournier (1998) emphasizes that in a context of customer's brand relationships, ignore their relational dealings, "is to ignore a vanguard of the marketing age" (p. 367).

Moreover, Algesheimer *et al.* (2005) argue that knowledgeable customers are more involved with the brand and virtual social network brand communities. Broadly, brand knowledge can be defined as all the attributes, benefits, images, thoughts, feelings, attitudes, and experiences that become associated to or evoked by the brand (Keller (2003). In this sense what underlines a brand relationship is the understanding by the customer of what a brand is, what it does, what it represents, how it makes him/her think, feel, and act (Keller, 2011). All of these different kinds of information become part of customer memory and can affect customer response to marketing activities (Esch *et al.*, 2006; Keller, 2003) and to the brand (Esch *et al.*, 2006). By creating differential customer responses and affecting the success of brand building marketing programs, brand knowledge may be a potential moderator of the CBE process. In addition, knowledgeable customers are more likely to assume a leadership role in the virtual social network brand communities (Algesheimer *et al.*, 2005). This factor can play a critical role in developing relationships, when products, brands or services offered lack competitive differentiation (Lacey, 2007). In this sense, customers may initiate marketing relationships due to appealing economic value, but in order to develop and continue the marketing relationship, social factors like customer recognition and shared values should be present (Lacey, 2007).

Brand reputation also represents the embodiment of the cumulative effect of all past and present marketing activities (Bang *et al.*, 2014). It is the customers' perception of the quality associated with the name of the brand (Selnes, 1993). In addition, brand reputation is closely tied to customers' trust of product quality, which affects customers' future behavioral intentions (Oh, 2000), customer loyalty (Selnes, 1993) and the customer decision making process in general (Dube and Renaghan, 2000). Therefore, brand reputation can also have an important role as a moderator in the relationship

between the customer and the brand. Several studies show that a high brand reputation provides the brand with a favorable first hearing (e.g. its advertising receives greater impact) and is interpreted in a more positive manner (Chaudhuri, 2002; Mitra and Golder, 2006; Oh, 2000). For instance, as the brand reputation in itself is an assessment of its value, customers can believe that their personal investment in a high-reputation brand would be more valuable for them (Chaudhuri, 2002). By choosing the brand with a positive brand reputation over others, the customer is likely to form a more favorable attitude towards the brand (Bang *et al.*, 2014).

In the same way, the size of the virtual social network brand communities can influence the levels of community identification and trust (Algesheimer *et al.*, 2005). Identification with the brand community is the “strength of the customer’s relationship with the brand community” (*op. cit.*, p. 20) and is one of the most relevant characteristics of a brand community (Füller *et al.*, 2008). Bhattacharya *et al.* (1995) define identification with a brand community as “the perception of belonging to a group with the result that a person identifies with that group” (p. 47). In this sense, the identification with the brand community is one of the central determinants of the community member behavior, because implies a cognitive component and an affective component (Algesheimer *et al.*, 2005). The cognitive component corresponds to the customer’s self-awareness of membership within the community and their perceived similarities with the community members, while the affective component is the customer’s emotional involvement with the group, that is, an affective commitment with the group. Consequently, in small-group brand communities (less than 50 active members), the levels of identification are higher, because it exist a stronger and multifaceted interpersonal relationships between customers/members (Dholakia *et al.*, 2004). Therefore, community membership and identification contributes to higher levels of individual customer intentions and behaviors towards the brand (Bhattacharya *et al.*, 1995; Dholakia *et al.*, 2004; Füller *et al.*, 2008).

Another key factor for developing and facilitating relationships exchange within the brand community is trust (Bruhn *et al.*, 2014). Brand community trust refers to the sense of safety and security arising from the honesty, reliability, and trustworthiness of a brand community (Casaló *et al.*, 2008). In this sense, trust is the element that facilitates interactions in a brand community, since it alleviates the perceived risk arising from the

interaction of two or more people (Bruhn *et al.*, 2014). Additionally, trust contributes to the cooperative behavior of brand community members (Casaló *et al.*, 2008). Furthermore, trust towards the virtual social network brand communities can also be an important element in influencing the customers' behavior, in terms of the member's intentions to maintain the tie, to recommend (Pentina *et al.*, 2013) and to participate in the virtual social network brand communities (Tsai and Men, 2013).

All these factors can act as moderators that facilitate and/or inhibit the CBE process. As interactions in social media will be translated into positive or negative attitudes towards the company, when affective reactions are positive, the customer's attitudes toward the company will be strengthened (Nambisan and Baron, 2007). Besides brand communities increase brand loyalty, brand involvement and brand value (Andersen, 2005).

3.6 Conclusion

Many academic disciplines, such as sociology, psychology, educational psychology and organizational behavior have examined the concept of engagement (Hollebeek, 2011a). Although this multidisciplinary interest has added richness to the construct, such diversity of scholarship also makes it more difficult to integrate the various perspectives on engagement and find a consensus on its nature. These varied definitions demonstrate different dimensions and aspects with different fields emphasizing different aspects of the concept. As a result, there is not a universal definition of engagement or even a scale of measurement.

In the academic marketing literature, the concept of engagement has been defined in a widely differing and even contradictory ways (Table 9). Sometimes the concept appears as a somewhat muddled, all-inclusive concept or as a synonym of other concepts like involvement, commitment, loyalty or participation. In this sense, it is possible to find several engagement sub-forms, such as customer engagement (e.g. Vivek *et al.*, 2012; Brodie *et al.*, 2011), customer engagement behavior (e.g. van Doorn *et al.*, 2010), or consumer brand engagement (e.g. Hollebeek *et al.*, 2014; Dwivedi, 2015). Additionally, until 2012, customer engagement research suffered from a strong conceptual bend and empirical work has only recently, although rapidly, begun to emerge. Consequently, relatively few authors have empirically tested and validated the definition of engagement and its dimensions, taking into consideration the context in which the

customer-brand encounter takes place. Moreover, the locus of customer engagement (its objects) has been predominantly set on brands of goods or services, organizations or companies, with limited interest in virtual social network brand communities (Algesheimer *et al.*, 2005; Dessart *et al.*, 2016; Wirtz *et al.*, 2013).

Review of existing literature suggests that customer engagement is a multidimensional and context-dependent concept that comprises a cognitive, an emotional and a behavioral dimension. Many authors across all academic disciplines directly or indirectly acknowledge the concept of engagement as a multidimensional concept, confirming the existence of these three dimensions (e.g. Brodie *et al.*, 2011, 2013; Dwivedi, 2015; Hollebeek *et al.*, 2014; Vivek *et al.*, 2014). However, some authors embrace a unidimensional (frequently behavioral) view of the concept (e.g. Cambra-Fierro *et al.* 2013; Kumar *et al.*, 2010; van Doorn *et al.*, 2010).

The complexity of the engagement variable lends itself to its own methodological challenge. This review identified four useful models for measuring customer engagement, however only the Hollebeek *et al.* (2014), Vivek *et al.* (2014) and Dwivedi (2015) scales comprise the three dimensions of engagement. Nonetheless, scales of Hollebeek *et al.* (2014) and Vivek *et al.* (2014) are not easily applicable to other foci of engagement.

Table 9 – Type of research, conceptualizations, definitions and dimensions of engagement in the marketing literature

Author(s)	Research type	Concept	Definition	Dimensionality
Bowden (2009)	Conceptual	Engagement	"psychological process that models the underlying mechanisms by which customer loyalty forms for new customers of a service brand as well as the mechanisms by which loyalty may be maintained for repeat purchase customers of a service brand" (p. 65)	Not explicated in the research
Calder <i>et al.</i> (2009)	Empirical (quantitative)	Consumer engagement with a website	"a collection of experiences [customer's beliefs about how a site fits into his/her life] with the site" (p. 322)	Multidimensional (experiential, social)
Higgins and Scholer (2009)	Conceptual	Engagement	"state of being involved, occupied, fully absorbed, or engrossed in something—sustained attention" (p. 102)	Multidimensional (cognitive, emotional and behavioural)

Pham and Avnet (2009)	Conceptual	Engagement	"motivational state related to involvement and absorption of attention (...) to be inferred from a pattern of action or withdrawal with respect to the target object" (p. 2)	Multidimensional (cognitive and behavioural)
Sprott <i>et al.</i> (2009)	Empirical (quantitative)	Brand engagement in self-concept	"individual difference representing consumers' propensity to include important brands as part of how they view themselves" (p. 92)	Unidimensional (emotional)
Kumar <i>et al.</i> (2010)	Conceptual	Engagement	"we agree with Van Doorn <i>et al.</i> (2010) (...) we also argue that it would be incomplete without the inclusion of customer purchases from the firm" (p. 298)	Unidimensional (behavioural)
Marketing Science Institute (2010)	Conceptual	Engagement	"customers' behavioral manifestation towards a brand or firm beyond purchase" (p. 4)	Unidimensional (behavioural)
Mollen and Wilson (2010)	Conceptual	Online engagement	"cognitive and affective commitment to an active relationship with the brand as personified by the website or other computer mediated entities designed to communicate brand value" (p. 923)	Multidimensional (sustained cognitive processing, instrumental value and experiential value)
van Doorn <i>et al.</i> (2010)	Conceptual	Customer engagement behaviours	"customer's behavioral manifestations that have a brand or firm focus, beyond purchase, resulting from motivational drivers" (p. 254)	Unidimensional (behavioural)
Brodie <i>et al.</i> (2011)	Conceptual	Customer engagement	"psychological state that occurs by virtue of interactive, cocreative customer experiences with a focal agent/object (e.g., a brand) in focal service relationships. It occurs under a specific set of contextdependent conditions generating differing CE levels; and exists as a dynamic, iterative process within service relationships that cocreate value. CE plays a central role in a nomological network governing service relationships in which other relational concepts (e.g., involvement, loyalty) are antecedents and/or consequences in iterative CE processes. It is a multidimensional concept subject to a context- and/or stakeholder-specific expression of relevant cognitive, emotional and/or behavioral dimensions" (p. 260)	Multidimensional (cognitive, emotional and behavioural)

Hollebeek (2011a)	Conceptual	Customer brand engagement	"the level of an individual customer's motivational, brand-related and context-dependent state of mind characterised by specific levels of cognitive, emotional and behavioural activity in direct brand interactions" (p. 790)	Multidimensional (cognitive, emotional and behavioural)
Hollebeek (2011b)	Empirical (qualitative)	Customer brand engagement	"the level of a customer's cognitive, emotional and behavioral investment in specific brand interactions" (p. 565)	Multidimensional (cognitive, emotional and behavioural)
Vivek et al. (2012)	Empirical (qualitative)	Customer engagement	"intensity of an individual's participation in and connection with an organization's offerings or organizational activities, which either the customer or the organization initiates" (p. 133)	Multidimensional (cognitive, emotional, behavioural and social)
Brodie et al. (2013)	Empirical (qualitative)	Consumer engagement	"Consumer engagement in a virtual brand community involves specific interactive experiences between consumers and the brand, and/or other members of the community. Consumer engagement is a context-dependent, psychological state characterized by fluctuating intensity levels that occur within dynamic, iterative engagement processes. Consumer engagement is a multidimensional concept comprising cognitive, emotional, and/or behavioral dimensions, and plays a central role in the process of relational exchange where other relational concepts are engagement antecedents and/or consequences in iterative engagement processes within the brand community" (p. 107)	Multidimensional (cognitive, emotional and behavioural)
Cambra-Fierro et al. (2013)	Empirical (quantitative)	Engagement	"as a set of customer behaviors vis-à-vis the firm – both transactional (loyalty, repurchase intention) and non-transactional (commitment, word-of-mouth, referrals, blogging, etc.) in nature – which guarantee future sales volumes, generate positive publicity and bolster brand reputation." (p. 326)	Unidimensional (behavioural)
Greve (2014)	Empirical (quantitative)	Customer engagement	"a psychological process of the customer that leads to the formation of loyalty", "a customer's behavioral manifestation towards a brand or a firm, beyond purchase, resulting from motivational drivers" and "a psychological state that is characterized by a degree of vigor, dedication, absorption, and interaction" (p. 203).	Multidimensional (vigor, dedication, absorption and interaction)

Hollebeek <i>et al.</i> (2014)	Empirical (quantitative)	Consumer brand engagement	"a consumer's positively valenced brand-related cognitive, emotional and behavioral activity during or related to focal consumer/brand interactions" (p. 154)	Multidimensional (cognitive processing, affective and activation)
Vivek <i>et al.</i> (2014)	Empirical (quantitative)	Customer engagement	"goes beyond purchase and is the level of the customer's (or potential customer's) interactions and connections with the brand or firm's offerings or activities, often involving others in the social network created around the brand/offering/activity" (p. 406)	Multidimensional (conscious attention, enthused participation and social connection)
Baldus <i>et al.</i> (2015)	Empirical (quantitative)	Online brand community engagement	"is the compelling, intrinsic motivations to continue interacting with an online brand community" (p. 979)	Unidimensional (Motivational)
Dwivedi (2015)	Empirical (quantitative)	Consumer brand engagement	"consumers' positive, fulfilling, brand-use- related state of mind that is characterized by vigor, dedication and absorption" (p. 100).	Multidimensional (vigor, dedication and absorption)
Yang <i>et al.</i> (2016)	Empirical	Brand engagement	"as the customers' behavioural manifestation towards a brand – beyond purchase – resulting from motivational drivers, which is captured through the interactive behaviours between consumers and brands." (p. 529)	Multidimensional (affiliation, conversation and responsiveness)

Additionally, customer's perceived brand reputation and brand knowledge, customer's identification with the social networking site and trust towards it appear in the literature as potential moderators of the CBE process. In the same way, the customer's gender and the brand characteristics perceived by customers can also be potential moderators. Further, in the next section (Section 4), the required and potential antecedents of CBE are discussed.

4. Antecedents of Customer Brand Engagement

4.1 Introduction

Prior studies identified, as antecedents required prior to the expression of engagement, the following sub-processes: customer involvement (Brodie *et al.*, 2011, 2013; Hollebeek, 2011a; Hollebeek *et al.*, 2014; Leckie *et al.*, 2016; Wirtz *et al.*, 2013), customer participation (Brodie *et al.*, 2011; France *et al.*, 2016; Hollebeek, 2011a; Mangold and Faulds, 2009) and customer interactivity (Hollebeek, 2011a; Leckie *et al.*, 2016; Vivek *et al.*, 2014). In specific contexts, like online environments, the customer flow experience can also be understood as an important CBE antecedent (Mollen and Wilson, 2010; Brodie *et al.*, 2011). Moreover, customer advocacy, customer cumulative satisfaction, customer trust and customer commitment can act as potential antecedents or consequences of CBE (Bowden 2009; van Doorn *et al.*, 2010; Brodie *et al.*, 2011; Hollebeek, 2011a; Sashi, 2012).

In this section, each one of these constructs is individually review and compare to the engagement concept, in order to differentiate them and demonstrate the distinguishing characteristics of customer engagement.

In this sense, the Section 4 is organized as follows: customer involvement (Section 4.2), customer participation (Section 4.3), customer interactivity (Section 4.4), customer flow experience (Section 4.5), customer advocacy (Section 4.6), customer cumulative satisfaction (Section 4.7), customer trust (Section 4.8) and customer commitment (Section 4.9). Finally, Section 4.10 presents the conclusions.

4.2 Customer Involvement

The involvement construct has been well researched, and is seen as a central concept in the customer behavior literature (Russell-Bennett *et al.*, 2007; Martín *et al.*, 2011). Customer involvement has a role in explaining customer behaviors, since it allows mediating the effects of media exposure and persuasion messages, as well as the depth of the decision-making process and on-going behaviors (Mittal and Lee, 1989; Martín *et al.*, 2011). It also represents the level of importance of an object to an individual, or the centrality of an object to an individual's ego structure (Russell-Bennett *et al.*, 2007).

Broadly, involvement can be described as an internal state of arousal comprised of three major properties: intensity, direction, and persistence (Warrington and Shim,

2000). Intensity refers to the person's degree of involvement or motivation, while direction is the object towards which an individual is motivated and persistence is the duration of the involvement intensity.

The original concept of involvement derives from the psychology literature of the 1980s that found and measured the degree to which some people were more concerned and thought more deeply about some things than others (Martín *et al.*, 2011). For example, Zaichkowsky (1985) defined involvement as “a person's perceived relevance of the object based on inherent needs, values and interests” (p. 342). Years later, Thomson *et al.* (2005) define involvement as “a state of mental readiness that typically influences the allocation of cognitive resources to a consumption object, decision, or action” (p. 79). Furthermore, Bowden (2009) highlights the definition of involvement as the customer ongoing concern in relation to a product category based on the perceived importance of that category, in terms of his/her self-concept, ego and value system and/or the general interest of the customer, during the purchase process.

Thus, customer involvement is especially motivated by the effect of information processing when the customer faces the object of implication (Martín *et al.*, 2011). In the same way, Hollebeek (2011a) stresses that customer involvement is associated with the level of interest and personal relevance in relation to a focal object/decision in terms of one's basic values, goals, and self-concept. This object/decision can be a purchase decision, a product category, a brand or a marketing communication (Mittal and Lee, 1989; Gordon *et al.*, 1998). As a result, involvement has been examining in a broader context to include different aspects of customer's behaviors and objects. In most studies, customer involvement is related to a product, a product class, a specific product category or a brand, and is also a process (enduring involvement or situational involvement), in addition to being viewed as a trait and an individual state (Olsen, 2007).

Despite some nuances in the different definitions, involvement “is the perceived value of a ‘goal-object’ that manifests as interest in that goal-object” (Mittal and Lee (1989, p. 365). For example, Mittal and Lee (1989) distinguish two forms of involvement: product involvement and brand-decision involvement. Product involvement is “the interest a consumer finds in a product class” (Mittal and Lee, 1989, p. 365), or as defined by Coulter *et al.* (2003), product involvement is “the personal

relevance or importance of a product category” (p. 152). On the other hand, brand-decision involvement is “the interest taken in making the brand selection” (Mittal and Lee, 1989, p. 365). As a result, Warrington and Shim (2000) stress that involvement is a function of the customer characteristics (e.g. needs, interests, values and goals), situations factors (e.g. purchase occasion or perceived risk of the purchase decision) and characteristics of the object (e.g. variations within the product/brand category) or stimulus (e.g. type of communication). Consequently, customers invest different involvement strengths in different objects and involvement is an influencing factor of customers’ decisions.

Further, customer involvement could be divided into two types: enduring involvement and situational involvement (Shaffer and Sherrell, 1997). Enduring involvement is “the ongoing level of product concern independent of situational influences” (*op. cit.*, p. 265), while situational involvement is “the temporary elevated level of product concern due to transient circumstances such as purchase” (*op. cit.*, p. 266).

When customers are involved, they devote more attention, exert a greater cognitive effort. They are also more participative (Gordon *et al.*, 1998) and open to invest time and energy in their relationship with a company (Goodman *et al.*, 1995). This is because, when customers become involved with the focal brands, they are more likely to engage in extensive external search and process information about the brands. In this sense, customers are unlikely to participate when they are not involved (Gronroos, 1995), because they do not see the future benefit of the relationship. When companies promote the participation of high-involvement customers, it is possible to build a rewarding relationship with customers who not only will provide valuable information to the company, but also will be more committed with the company offerings (Sheth and Parvatiyar, 1995).

Additionally, customer’s level of involvement can influence post purchase satisfaction. Involvement and satisfaction are well researched concepts in the marketing literature, and it is generally assumed that high involvement results in high levels of satisfaction (McColl-Kennedy and Fetter, 2001; Mudie *et al.*, 2003; Shaffer and Sherrell, 1997). When customers are involved, they typically have a high level of knowledge about the product or brand, and this may lead to a better purchase choice and

a level of satisfaction (Shaffer and Sherrell, 1997). Therefore, customers with high involvement are motivated to experience higher satisfaction (McColl-Kennedy and Fetter, 2001). According to Olivia and Oliver (1995), high levels of involvement lead the customer to stick to an original position, despite being a satisfactory or unsatisfactory position, until a critical point where the customer will radically change his or her satisfaction level. If highly involved customers experience dissatisfaction, they may feel that a personal investment is not yielding results and experience more overall dissatisfaction than customers who have no personal involvement (Goodman *et al.*, 1995). Therefore, highly involved customers can experience a greater long-term satisfaction than low-involvement customers (Olivia and Oliver, 1995).

Moreover, customers with high levels of involvement are more likely to exhibit intensified levels of engagement (Vivek *et al.*, 2012). Gordon *et al.* (1998) conclude that involvement creates an “ongoing commitment on the part of the customer with regard to thoughts, feelings and behavioral responses to a particular object” (p. 447). Giving the characteristics of this “ongoing commitment”, engagement is being denoted as “ongoing commitment” in the study of these authors. In the same way, Hollebeek *et al.* (2014) found that customer involvement has a positive effect on the three dimensions (cognitive processing, affection and activation) of CBE. Wirtz *et al.* (2013), in a context of online brand communities, agrees that customer engagement increases as the level of customer involvement with the brand intensifies.

Comparing customer involvement and engagement, Mollen and Wilson (2010) identify two distinctions between the two concepts. First, involvement is a passive allocation of mental resource, while engagement encompasses an active relationship with the brand. Second, involvement is associated with the exercise of cognition and engagement goes beyond and it requires the satisfying of experiential value as well as the instrumental value. In the same way, Dwivedi (2015) stresses that customer involvement characterizes by a customer proclivity towards a class of products as relevant, important and meaningful, while CBE implies a high degree of relevance that customers attach to a specific brand. Additionally, Hollebeek and Chen (2014) stress that CBE requires the occurrence of an individual’s focal interactions with a specific object (e.g. a brand), while involvement refers to customer’s interest and personal relevance and does not require the undertaking of any specific interactions *per se*.

Therefore, Brodie *et al.* (2011, 2013), Hollebeek (2011a), Hollebeek *et al.* (2014), Islam and Rahman (2016), Leckie *et al.* (2016) and Wirtz *et al.* (2013) argue that customer involvement is an antecedent required prior to the expression of CBE.

4.3 Customer Participation

Customer participation is integral to CBE, since it is “the degree to which the customer is involved in producing or delivering a service” (Vivek *et al.*, 2012, p. 134). In this context, customers participation can be seen as the inputs provided by the customer (Ngo and O'Cass, 2013), i.e., “customer’s contribution of labor or resources to the creation of offering” (Mustak *et al.*, 2013, p. 341). Consequently, customer participation directly influences quality and behavioral outcomes, as well as the effective creation of the product or delivery of the service (Bolton and Saxena-Iyer, 2009).

In this matter is also important to stress the conceptual difference between customer participation in the creation of core offerings and in the creation of value. Bolton and Saxena-Iyer (2009) classify these concepts as co-production and co-creation, respectively. Co-production implies that the customer participation is within the organization-defined parameters and occurs when the customers take the company’s value proposition and integrates it with their own resources to generate something. Conversely, in co-creation, the customer participation goes beyond the selection of pre-determined options and is spontaneous. Co-production involves the purposeful integration of operand and operant resources from the company and the customer to develop a value proposition (Sheth and Uslay, 2007).

According to Lengnick-Hall *et al.* (2000), co-production means “engaging customers as active participants in the organization's work or treating customers as ‘partial employees’” (p. 364). As a result, co-production precedes the usage stage and takes place within the production process. Thus, co-production implies that customers participate in the various activities performed in one or more of the production stages (Etgar, 2008). The various activities can be intellectual work of initiating and designing, resource aggregating and processing activities that lead to creation of outputs.

In this sense, Yi *et al.*, (2011) stress that customer participation includes only required behaviors necessary for the successful offering creation. These behaviors include preparation, relationship building, information exchange and intervention

(Kellogg *et al.*, 1997; Youngdahl *et al.*, 2003). The preparation behaviors include seeking referrals, researching alternative providers and gathering information prior to the encounter (Kellogg *et al.*, 1997; Youngdahl *et al.*, 2003). Building a relationship with the company through actions which serve to better know the company (Kellogg *et al.*, 1997) and leverage the relationship (Youngdahl *et al.*, 2003). Information exchanges involves exchanging relevant information (Youngdahl *et al.*, 2003), in order to clarify requirements, reduce uncertainty and satisfy other cognitive needs (Kellogg *et al.*, 1997). Finally, intervention occurs when customers provide negative performance feedback and involve themselves in problem diagnosis and resolution (Kellogg *et al.*, 1997; Youngdahl *et al.*, 2003).

Moreover, co-production can also encompass cooperation formats between customers (Etgar, 2008). Customers can cooperate with other customers by providing access to their resources or co-working to create joint intellectual outputs. Customers decide to participate in co-production in order to achieve current goals, which reflect their values and act as motivational forces (Etgar, 2008). In the same way, customers participate in order to reduce perceived risks, which included physical, financial, psychological, performance, social and time-related risks associated with receiving inappropriate products (Etgar, 2008).

In a context of a virtual social network brand community, Bolton *et al.* (2013) identify six types of customer active participation: contributing, sharing, consuming, searching, participating and playing. In a more systematic way, Muntinga *et al.* (2011) view customers' online brand participation activities as a continuum of three usage types: consuming, contributing and creating. The minimum level of online brand-related activeness is the consumption of brand-related content, which consists in participating without actively contributing and creating content. These types of customers view brand-related contents (e.g. pictures, videos, product reviews) and the comments of the others customers. The middle level indicates both user-to-content and user-to-user interactions about brands. Therefore, these customers actively contribute with brand-related content by commenting and engaging in branded conversations on online brand communities forums or social network sites. The last level is the production and publication of brand-related content that others consume (e.g. post product reviews, produce and upload branded videos, music and pictures).

Therefore, customer co-production shifts the format of interactivity from a single interaction to a relationship type of exchange over time (Etgar, 2008). When customers actively participate in co-production, they are willing to put more efforts and time on idea contributions and information sharing (Varki and Wong, 2003). During the phase of co-production, both parties created points of contact, improved knowledge of offerings and consequently they developed and enhanced the relationship between them (Cheung and To, 2011). As a result, co-production allows a more effective, efficient and constructive dialogue between the company and the customer (Ngo and O'Cass, 2013). In this matter, virtual social network brand communities play an important role in facilitating this interaction. The major contribution of virtual social network brand communities is their ability to allow rapid and low cost interactions between customers and companies and among customers (Canhoto *et al.*, 2016). In the same way, Rust and Lemon (2001) stress that the “advent of the Internet offers true interactivity with the consumer, customer-specific, situational personalization, and the opportunity for real-time adjustments to a firm’s offering to customers, as well as changes in consumer expectations regarding firm service strategies that flow from these developments” (p. 85). Nonetheless, Casaló *et al.* (2007) point out the importance of trust in the virtual social network brand community in the co-production process. In general, customers will tend to engage more in co-production when they trust in the community around which the brand virtual community is developed. In this sense, co-production along with social media can facilitate an exchange of valuable information between customers and companies (Lengnick-Hall *et al.*, 2000).

Since co-production enables customers to shape the encounter, it is reasonable for customers to expect that co-production will produce an experience that is pleasant and meets their needs (Lengnick-Hall *et al.*, 2000). Based on what they feel, hear and observe, customers will form expectations and the comparison of those expectations with the customers’ perception of the product, service or brand will result in either confirmation or disconfirmation. Customers’ expectations are confirmed when perceptions exactly meet expectations, while disconfirmation will be the result of a discrepancy between expectations and perceptions. This discrepancy is positive when performance exceeds prior expectations and negative when expectations exceed performance. As a result integrating customers into the company’s creation and delivery

process can lead to the improvement of quality, which in turn leads to a higher customer satisfaction (Yen, 2005) and increases positive behavioral intentions from customers towards the company (Ngo and O'Cass, 2013). Moreover, the integration of the customer will allow adjusting their expectations and contributing to the confirmation or positive disconfirmation of their expectations. As co-production leads to stronger perceptions of customization and cost reductions, it is more likely that customers make a favorable assessment of the product or brand (Auh *et al.*, 2007). Moreover, in the case of high level of co-production, customers may regard themselves as active organizational members and enjoy feelings of confidence, pride and passion in a brand (Cheung and To, 2011). Thus, customers have a higher propensity to like and favorably evaluate the brand.

Studies have shown that customer participation through virtual brand communities strengthens relationships (Gummerus *et al.*, 2012). As customers become effective co-producers, they learn more about the company, its products, services and brands. Consequently, they believe that the continuance of a partnership with the company leads to beneficial results (Lengnick-Hall *et al.*, 2000). This type of participation provides common interest to both parties and results in higher levels of enthusiasm (Bagozzi and Dholakia, 2006). Moreover, customers who actively participate tend to increase their willingness to adopt company's new products and are less likely to embrace competing products or brands (Wirtz *et al.*, 2013). Thereby, customer participation, defined as co-production, involves the customer in an interactive process that conduct to a greater customer's engagement (Vivek *et al.*, 2012).

Despite being integral to engagement, customer participation is also distinct from engagement and precedes it. Customer participation is essentially a behavioral experience, while engagement incorporates feeling, experiences, emotions, cognitive elements and activities, regardless of the exchange process of co-producing. Therefore, Hollebeek (2011a), Leckie *et al.* (2016) and Vivek *et al.* (2012) argue that customer participation, defined as co-production, is an antecedent required prior to the expression of CBE, while co-creation of value is a potential consequence of customer engagement (Hollebeek, 2011a).

4.4 Customer Interactivity

Interactivity has been defined in many ways. Before Web 2.0, these connections were limited by space and time restrictions. Consequently, interactivity was limited to narrow circles of people (family, friends, and colleagues) and by the available technology (word-of mouth, letters, and telephone). In the last decade, the focus of interactivity research has changed to the technology-mediated context (Wirtz *et al.*, 2013). Tools such as texting, instant messaging, email, blogging, virtual worlds, and social networking sites allow a more frequent, faster and richer interaction among larger groups of connected individuals, communities and companies (Sashi, 2012). Nowadays, customers can give instant feedback to companies implicitly or explicitly (Liu and Shrum, 2002). Moreover, internet applications enabled companies to establish a continuing dialogue with customers (Tsai and Men, 2013) and facilitated techniques that allow tracking customers' online behavior (Liu and Shrum, 2002). This shift to a more active customer role heightens the importance of interactivity at the brand level (Liu and Shrum, 2002).

From a communicator's perspective, interactivity is seen as a "characteristic, feature, property or capability inherent in a medium or an interaction system that enables or facilitates an interaction between two parties" (Wu, 2006, p. 88). From an audience's perspective, interactivity is viewed as individual trait, a message or a psychological state of mind experienced by an individual during interaction (Wu, 2006). Therefore, in theoretical terms, the interactivity concept has been employed as an assumed independent variable to describe the medium itself (Kayany *et al.*, 1996), as a dependent variable measuring customer's perception, and/or as a measure of the media's potential ability to let the user exert an influence on the content and/or form of the mediated communication (Wu, 2006). Although these concepts suggest different opinions regarding the conceptualization of interactivity, the importance of interactivity as a critical successful marketing factor in an online environment has been commonly accepted (Hoffman and Novak, 1996; Lee, 2005).

According to Liu and Shrum (2002), interactivity can be classified into three types: user-machine interaction, user-user interaction and from a user-message interaction perspective. The early definition of interactivity is "interactivity as a user-machine interaction", in which the emphasis is on human interaction with computers. This

definition by itself, it is not enough to capture the concept, because it leaves aside the emergence of more advance technologies (e.g. Internet). Interactivity as a user-user interaction contemplates that communication in a computer-mediated environment is interactive as more it resembles as an interpersonal communication. However, this perspective ignores the ability of a medium, as for example Internet, to break the boundaries of traditional interpersonal communication. Finally, from a user-message interaction perspective, interactivity is defined as “the ability of user to control and modify messages” (Liu and Shrum, 2002, p. 54). Based on these three perspectives, Liu and Shrum (2002) define interactivity as “the degree to which two or more communication parties can act on each other, on the communication medium, and on the messages and the degree to which such influences are synchronized” (p. 54).

In a context of customer-company interaction, Bolton and Saxena-Iyer (2009, p. 92) define interactivity as “some form of customer-company interaction in an environment characterized by any level of technology (i.e., a high or low technology environment)”. In the same sense, some authors identified the elements that characterize interactivity in this context. Liu and Shrum (2002) identified three elements: active control, two-way communication and synchronicity. Active control corresponds to the voluntary and instrumental actions that directly influence the customer’s experience. While, two-way communication refers to the ability for reciprocal communication and synchronicity refers to the degree to which customers’ input into a communication and the response they receive. The extent of interactivity is dependent not only on how technology enables to reach customer, but also on how customer participate in the interaction (Bolton and Saxena-Iyer, 2009). In the same way, Hoffman and Novak (1996) identified two main types of interactivity considered to be applicable to the web: person-interactivity and machine-interactivity. Person-interactivity is the ability for a person using the web to communicate with other individuals, while machine-interactivity refers to the ability for an individual to access hypermedia content. Therefore both control and reciprocal communication are important elements of online interactivity, since control helps to ensure a reciprocal exchange, which in turns provides an effective channel for exerting control (Liu, 2003).

However, Lee (2005), McMillan and Hwang (2002) and Wu (2006) suggest that interactivity should be investigated as it is perceived and/or experienced by the

customer. For these authors, customer interactivity should not be studied as a process or counting features, because perception is far more influential than reality defined objectively. The focus of investigation on how users perceive and/or experience interactivity is consistent with marketing, advertising and communication traditions (McMillan and Hwang, 2002). Wu (2006) define perceived interactivity “as a psychological state experienced by a site-visitor during his or her interaction with a website” (p. 91). Additionally, it manifests in three dimensions: (i) perceived control over the site navigation, pace or rhythm of interaction and content being access; (ii) perceived responsiveness from the site-owner, navigation cues, signs and real persons online; and (iii) perceived personalization of the site. Thus, customer interactivity is essentially a behavioral component, while perceived interactivity is a psychological state experience by customers.

According to Huang (2003), interactivity is the key to creating experiential flow, since interactivity increases the main dimensions of the flow experience. More control over the interaction and the extent to which the interaction is synchronous facilitates the absorption in the online activity and increases curiosity that are dimensions of flow experience. Additionally, high levels of interactivity enhances the subjective feeling of “having control” over the interaction, stimulates user’s curiosity and makes navigation intrinsically interesting (Novak *et al.*, 2000). In this sense, flow experience is the underlying mechanism by which cognitive, attitudinal and behavioral responses to interactivity can be explained (van Noort *et al.*, 2012). Therefore, higher levels of interactivity should lead to more powerful flow experiences. Nonetheless, there is little empirical support for this conceptual idea (e.g. Chang and Wang, 2008; Huang 2003; Novak *et al.*, 2000; van Noort *et al.*, 2012) and, in the majority of these studies, the conceptualization of interactivity was limited to the synchronicity dimension. On the other hand, Hoffman and Novak (1996) argue that customer flow experience mediates the effects of customer interactivity in a brand web site. Prior empirical research that pointed to the mediating role of flow focused on web navigation in general (e.g. Novak *et al.*, 2000) and the uses of communication tools such as blogs, instant messaging (Chang and Wang, 2008) and web sites (van Noort *et al.*, 2012). Perceived interactivity as a psychological state experience by customers is conceptually similar with the flow experience concept. However, Wu (2006) argues that despite the similarity, perceived

interactivity is “more broadly defined as a continuum with the flow state as its high end” (p. 92).

A highly interactive online experience, regarding problems, suggestions or requests also ensures that customer’s opinions are heard. Consequently, it will reduce frustration associated with waiting, feeling ignored or manipulated by the company and potentially will result in a more satisfying experience (Liu and Shrum, 2002). As noted by Salvati (1999), companies will not be able to fully satisfy their customers unless they dedicate themselves to interacting proactively and constructively with customers better than competitors do. Moreover, interactivity substantially increases the amount of information that can be shared with customers (Anderson and Swaminathan, 2011). In a matter of minutes, a prospective customer can easily compare prices and overall benefits, and access to a range of opinions and insights from other customers. This additional relatively objective information available on Internet helps the customer choose the exact product or brand desired (Alba *et al.* 1997), enhancing satisfaction. In the same way, increased levels of interactivity may allow customers to gain control of their experience, which can result in an increasing of customer satisfaction (Ballantine, 2005; Devaraj *et al.*, 2002).

The issue of interactivity appears to play an important role in building customer relationships (Wu, 2006). Incipient research on interactivity suggests that customer interactivity has a role enhancing relationship building with customers in the online environment (Brodie *et al.*, 2011; Mangold and Faulds, 2009; Thorbjørnsen *et al.*, 2002; Wu, 2006). Brodie *et al.* (2011) identify interactivity as core to brand engagement. In the same sense, Mangold and Faulds (2009) argue that the increased interaction by the brand enhances the effect of engagement, because customers are able to submit feedback. Similarly, France *et al.* (2016) postulate and test the combined roles of interactivity and brand quality as essential to create brand engagement. Consequently, customer interactivity is considered as a required antecedent of CBE (Hollebeek, 2011a).

4.5 Customer Flow Experience

Flow has been studied in a broad range of contexts including sports, work, shopping, games, hobbies and computer use. Although some researchers advocated the importance of online flow in a commercial context (e.g. Huang, 2006), others claimed that flow

experience is irrelevant for marketing (Zeithaml *et al.*, 2002). For these authors, when customers purchase items online, they are goal oriented, consequently “entertainment-related criteria associated with online use in general (such as flow and other experiential aspects) are not relevant when the context is purchase” (p. 363). On the other hand, Huang (2006) defends that flow experience has a central process in Web navigation and its conceptualization and measurement is important for assessing customer’s behaviors on the Web and implementing electronic commerce. As offer a unique experience is the key to winning the heart and mind of customers, flow experience has become a key element to measure the extent and intensity of the customer’s experience in online environment (Novak *et al.*, 2000).

In line with the observation of Huang (2006), Thatcher *et al.* (2008) define flow as “a state of consciousness (usually characterized by a loss of a sense of time passing) that is sometimes experienced by individuals who are deeply involved in an activity they are enjoying” (p. 2240). Based on a definition that also embrace both pleasure and concentration components, Ghani and Deshpande (1994) proposed five components of flow experience: pleasure, control, concentration on the task, experimentation and challenge. The compound effect of all components leads to a diminished sense of time during the activity and enjoyment is a residual product of absolute concentration. In a similar way, Pace (2004) defines flow experience as “a state of consciousness that is sometimes experienced by people who are deeply involved in an enjoyable activity” (p. 329). However, Pace (2004) identifies additional elements of the experience, such as the balance between the challenges of an activity and the skills required to meet those challenges, setting clear goals and feedback, merging of action and awareness, the loss of self-consciousness, the distorted sense of time and the autotelic experience. Later, Sharafi *et al.* (2006) incorporated into the model the motivational aspect of interaction.

In a context of flow experience during customer navigation on the Web, Novak *et al.* (2000) define customer flow experience as “a cognitive state experienced during online navigation that is determined by (1) high levels of skill and control; (2) high levels of challenge and arousal; and (3) focused attention; and (4) is enhanced by interactivity and telepresence” (p. 24). According to Hoffman and Novak (1996), there are two general types of navigation behavior: a goal-directed and an experiential. In the first mode, the customer “is extrinsically motivated to find a particular site or piece of

information on a site” (*op. cit.*, p. 45), while in the second type of search the customer “is intrinsically motivated and corresponds to a nondirected, exploratory search mode” (*op. cit.*, p. 45). In this sense, customer flow experience occurs when the subject encounters with a challenge that is experienced as pleasurable, but can be master. The shifting between the two locus of control dimension is driven by ambition or curiosity that encourages subjects to find new challenges to master (Sharafi *et al.*, 2006). In addition, the authors found that in order to experience flow, individuals should know how to use different IT-competence. In other words, user’s skill, competence and fluency in usage, as well as his/her personality will influence the quality of interaction, efficiency and pleasure of the activity. Consequently, Pace (2004) highlights four personal characteristics that influence an individual’s propensity to experience flow: curiosity and personal interests, time urgency, navigation skill and absorption.

In this sense, flow is a temporarily unconscious experience in which an individual engages in an activity with total concentration, control, and enjoyment (Liu *et al.*, 2016). As a result, Zhou and Lu (2011) measured flow experience based on two dimensions: perceived enjoyment and attention focus. Moreover, Mathwick and Rigdon (2004) also focus the importance of including the following dimensions: navigational challenge, Internet search skill and Internet usage. Therefore, flow experience is a two-dimensional state that reflects affective (Rose *et al.*, 2012) and cognitive aspects (Novak *et al.*, 2000; Hoffman and Novak, 1996). Flow experience is fun, because when in a flow state, the individual finds the activity intrinsically interesting (Novak *et al.*, 2000). The individual is involved in the activity for its inherent pleasure and enjoyment, the activity is performed for its own sake and not for some extrinsic reward (Fullagar *et al.*, 2013). Additionally, flow experience is cognitive, because represents the optimal experience that stems from individual’s perceptions of challenges and skills in a given situation (Hoffman and Novak, 1996).

Huang (2006) stresses that when flow experience is applied directly to the marketing context; it suffers from conceptual ambiguity and overlaps with the conceptualization of customer involvement. Both concepts are motivational constructs, but they differ in the motivations and the benefits sought. Flow is defined by the presence of intrinsic motivation or enjoyment in an activity that can be precipitated through focusing attention on the activity and the perception of being in control. Whereas the core

concept behind involvement, lies in personal relevance, regardless of whether the locus of personal relevance resides in the customer (enduring involvement) or the situation (situational involvement).

Previous research has identified numerous positive consequences of flow, including increased exploratory behavior (Novak *et al.*, 2000), positive attitudes to the brand (Mathwick and Rigdon, 2004; van Noort *et al.*, 2012) and favorable affective responses (van Noort *et al.*, 2012). Additionally, flow is a compelling experience that can be an important predictor of satisfaction (O’Cass and Carlson, 2010; Hsu *et al.*, 2013). The rich and interactive experiences positively impact customers' evaluations of a brand through more intense affective and cognitive experiences. In this way, O’Cass and Carlson (2010) and Hsu *et al.* (2013) showed that flow experience will increase positive customer perceptions, which in turn will lead to customer satisfaction. Moreover, attention centered on a limited stimulus field constitutes a crucial cognitive state of flow experience (Ghani and Deshpande, 1994). Consequently, focused attention helps the process information flow, which leads to wiser decisions and higher user satisfaction.

Hoffmand and Novak (1996) stress that customers who experience the flow state exhibit more positive subjective experiences than those that do not. The rich and interactive experiences positively impact customers' evaluations of a brand through more intense affective and cognitive experiences (Liu *et al.*, 2016). Consequently this leads to a subjective perception of positive affect and mood, a higher degree of pleasure and connection with the brand (Mollen and Wilson, 2010). Therefore, when customers obtain a good flow, they are likely to perceive their online experiences as compelling and become engage (Novak *et al.*, 2000). Thus, customer flow experience may acts as an antecedent of CBE (Mollen and Wilson, 2010; Brodie *et al.*, 2011).

4.6 Customer Advocacy

According to Antony (2015), customer advocacy “must be the heart of any successful and growing businesses of tomorrow” (p. 725). For Lacey and Morgan (2009), customer advocacy “reflects combinations of marketing resources that contribute to a more efficient and effective marketing enterprise” (p. 4). In the same way, Lawer and Knox (2006) expound customer advocacy “as an advanced form of market orientation that responds to the new drivers of consumer choice, involvement and knowledge” (p. 123). This definition considers customer advocacy as a customer-

oriented organizational approach to engage in satisfying customer needs as a means to empower customers in the marketplace. In the same sense, Chelminski and Coulter (2011) define consumer advocacy as “a generalized tendency to share market information to warn consumers so that they can avoid negative marketplace experience” (p. 362).

The key to an advocacy strategy is that a company must become trustworthy in the eyes of its customers (Antony, 2015). The underlying premise of customer advocacy is that if the company attends the best interests of its customers, customers will reciprocate with their trust and commitment (Roy, 2013; Urban, 2004). In this sense, Antony (2015) highlights some key elements that companies should take into account for creating customer advocacy: (i) transparency of information provided to customers; (ii) superior quality of products/services to gain customer trust; (iii) collaborative work with the customers; and (iv) supply chain quality.

Customer advocacy can take different forms. Lacey and Morgan (2009) identify four customer advocacy behaviors: voluntarily sharing of information (customer interactivity), participation in marketing research activities (customer participation), word-of-mouth (WOM) referrals and increasing levels and proportions of current purchasing activities.

WOM has been identified as more trustworthy and as having greater impact on customers' purchasing decisions than other communication channels (Wolny and Mueller, 2013). When customer advocacy takes the form of WOM referrals, customers are acting as advocates on behalf of that product, service or brand (Fullerton, 2011). WOM referrals are “any positive or negative statement made by potential, actual, or former customers about a product or company, which is made available to a multitude of people and institutions via the Internet” (Hennig-Thurau *et al.*, 2004, p. 39). WOM can be divided into two constructs: WOM activity and WOM praise (Harrison-Walker, 2001). WOM activity refers to the frequency, number of people to which the WOM sender communicates, and the detail and quantity of information provided by the sender during the WOM communication process (Harrison-Walker, 2001). On the other hand, WOM praise comprises the customer's favorability and pride about the product, brand or service supplier (Harrison-Walker, 2001). As a result, customer advocacy under the form of WOM referrals constitutes the customer's willingness to give strong

recommendations, and praise to other customers on behalf of a product, brand or service supplier (Fullerton, 2011; Harrison-Walker, 2001). Nonetheless, WOM has a valence and can be positive, neutral or negative (Mazzarol *et al.*, 2007).

For Reichheld (2006), the act of recommending a company to others is the ultimate test of a strong customer relationship. Fullerton (2011) reinforces this idea by affirming that WOM “is a key artifact of a situation where consumers are loyal to their relational partner” (p. 93). On the Internet, WOM referrals have three dimensions: opinion-seeking, opinion-giving and opinion-passing (Chu and Kim, 2011). Customers with a high level of opinion-seeking behavior will search for information and advice others, while customers with high levels of opinion-giving behavior will tend to exert a great influence on others’ attitudes and behaviors. On the other hand, opinion-passing behaviors can facilitate multidirectional communication, since on Internet customers can “spread the word” on a global scale. In this sense, WOM is a behavior undertaken by customers who are actively and attitudinally loyal to their relational partner (Fullerton, 2011).

In this sense, WOM communication plays an important role in shaping customers’ attitudes and behaviors (Brown and Reingen, 1987). For instance, it can influence purchase decisions, expectations, pre-usage attitudes and post-usage perceptions (Ranaweera and Prabhu, 2003). The role of customers in producing and diffusing content has been strengthened with the emergence and growth of social networks (Eisingerich *et al.*, 2014) and can take place in many ways, such as Web-based opinion platforms, discussion forums, Web sites or news groups (Hennig-Thurau *et al.*, 2004). According to Hennig-Thurau *et al.* (2004), platforms, which do not require knowledge on the part of the customer to obtain information and are relatively easy to operate, exerts a stronger impact on customers. Kozinets *et al.* (2010) explain that social networks have transformed WOM referrals, because customers spread comments not only to reduce dissonance or for altruistic reasons, but also because the customer is now an actor in the system. Therefore, when WOM referrals are expressed on Web-based opinion platforms, the impact on customers’ attitudes and behaviors are higher than it is articulated through other means. On Web-based opinion platforms, WOM has an amplifier effect. This megaphone effect is due in particular to the fact that WOM is

characterized not by a one-to-one oral communication but rather a one-to-many written communication and they are public (Eisingerich *et al.*, 2014).

The majority of studies on the factors that give rise to WOM are focused on offline WOM (Kimmel and Kitchen, 2014). In addition, Wolny and Mueller (2013) stress that the majority of WOM conversations occurs offline, face-to-face conversations are more credible and have a higher emotional content. Consequently, the extent to which similar drivers operate in the online context remains unexplored. Hennig-Thurau *et al.* (2004) provide some preliminary insight into this issue. The authors expect that some of the drivers of offline WOM would also be relevant for explaining the onset of online WOM. Their analysis led to the identification of eight motives for giving online WOM: (i) venting negative feelings; (ii) concern for other customers; (iii) social benefits; (iv) economic incentives; (v) helping the company; (vi) advice seeking; (vii) platform assistance; and (viii) extraversion/positive self-enhancement.

Mazzarol *et al.* (2007) argue that customer advocacy is a stronger measure, because customers will only endorse a brand when they have strong feelings about it. In the same way, Lawer and Knox (2006) argued that customer advocacy aims to build deeper customer relationships by developing mutual transparency, dialogue and partnership with customers. These searches for product/ brand information, creation of content and willingness to share content with others is beneficial in increasing brand engagement and relevance (Chu and Kim, 2011). As a result, advocacy stage may be a potential antecedent of CBE for existing customers (Hollebeek, 2011a; Sashi, 2012) and a potential consequence for new and/or existing customers (Hollebeek, 2011a; Islam and Rahman, 2016; Sashi, 2012). In the same way, when considering only the advocacy behavior of WOM referrals, brand engagement can also be a consequence or a driver of this construct (Hollebeek and Chen, 2014). WOM referrals provide a highly credible mean of persuasion, because the sender is not seen as having an interest in selling. Consequently, the information is portrayed as meaningful (Islam and Rahman, 2016; Mazzarol *et al.*, 2007). In addition, customer dissemination of focal positive brand related WOM is viewed as a particular reflection of the customer's brand attitude. In this sense, customer's positive WOM referrals can propitiate the expression of CBE, and vice-versa (Hollebeek and Chen, 2014).

4.7 Customer Cumulative Satisfaction

In the field of relational marketing, satisfaction is often seen as a central determinant and is a subject that gained new attention in a shift paradigm from transactional marketing to relational marketing (Bricci *et al.*, 2016). Customer satisfaction is one of the relational constructs (like commitment or trust) that will affect long-term customers' behaviors, such as customer retention, willingness to enhance the relationship and WOM communication (Morgan and Hunt, 1994; Fullerton, 2011). Consequently, customer satisfaction has developed extensively as a construction for actively monitoring and controlling the relationship between customers and companies, brands or products (Bricci *et al.*, 2016).

First of all, it is important to distinguish between the cumulative satisfaction and transaction-specific satisfaction. This distinction is based on the amount of elaboration upon the evaluation of the brand, which depends on the customer's motivation and capacity to evaluate the brand (Bloemer and Kasper, 1995). According to Brunner *et al.* (2008), cumulative satisfaction comprises "all encounters of the customer-provider relationship" (p. 1097), while transaction-specific satisfaction is the satisfaction resulting from a single encounter. Shankar *et al.* (2003) define cumulative satisfaction as the "cumulative effect of a set of discrete service encounters or transactions with the service provider over a period of time" (p. 156). Moreover, authors summarize the determinants of customer satisfaction into four: frequency of use, customers' prior experience, attribute-level performance and easiness of obtaining information about the product/service.

Therefore, cumulative satisfaction and transaction-specific satisfaction are not independent of each other (Brunner *et al.*, 2008). For example, prior experiences, which are cumulative satisfaction, affect expectations and influence transaction-specific satisfaction. In the same way, new experiences will supplement and adjust the cumulative satisfaction of the customer. However, experienced customers will probably not defect, when they have an unsatisfying experience, because for them cumulative satisfaction works like a buffer. It will be necessary a substantially change on quality, in order to affect the cumulative evaluation of the customer (Johnson *et al.*, 1995). In this sense, these different conceptualizations are complementary and serve different purposes (Olsen and Johnson, 2003). Transaction-specific satisfaction captures the

customer's psychological reactions on a given occasion or over a given time period, while cumulative satisfaction leaves the time period of evaluation open. In this sense, cumulative satisfaction recognizes that customers rely on their entire experience, when forming intentions, and consequently customer cumulative satisfaction allows to better predict customers' intentions and behaviors.

According to Gustafsson *et al.* (2005), cumulative satisfaction has a strong effect on the perception of the product quality, service quality and price equity (affects customer cognition) and contains a significant affective component. Van Doorn *et al.* (2010) argue that once a customer is satisfied with the brand, a high level of engagement can be achieved, taking on the form of loyalty, commitment and word-of-mouth.

In response to a consumption experience, customers can undertake on negative and positive WOM referrals (Fullerton, 2011). According to Reichheld (2003), WOM referrals are the outcome of rational and emotional responses, resulting from customer's experiences regardless of their level of expertise with the product, brand or company. When customers voluntarily provide positive recommendations on products, services or brands, they are acting as promoters of the object. In the same way, it is possible to deduce that there is a lower probability of the customer speaks negatively about a product, brand or company to other customers, when they are satisfied with it. Furthermore, customers whose expectations have been met and exceeded are eager to share their experience (Eisingerich *et al.*, 2014). Consequently, satisfied customers tend to recommend the product/service and promote the company to others, recommend the brand's services more frequently (Roseman, 1991), and make supportive and positive recommendations about the brand (Chitturi *et al.*, 2007). These customers recommend their partner to people that they care about, because they feel comfortable and pleased with the product, brand or service provider (Fullerton, 2011). However, some authors (e.g. Fullerton, 2011; Mazzarol *et al.*, 2007) stress that the relation cause-effect between satisfaction and WOM communication is not so clear, because satisfied customers are not always loyal, subsequently they may not engage in WOM communication.

Garbarino and Johnson (1999), and Delgado-Ballester *et al.* (2003) stress that satisfaction, as a general evaluation of the consumption experience with a brand, can also generate brand trust. Customer satisfaction is a factor that generates confidence in the company offerings. For instance, Román (2003) proposed that customers' satisfying

encounters with a service organization should reinforce their trust in the organization and supported this proposition within a financial services context. The effect of customer satisfaction on trust has been also addressed in the online contexts. For example, Dabholkar *et al.* (2009) supported this proposition within the context of online group chatting. The authors confirmed that economic and social satisfaction led to greater cognitive and affective trust, respectively. For some authors, customer trust is the aggregate evaluation of customer satisfaction and might be one of the most essential consequences of satisfaction (Ou *et al.*, 2015). Despite the wider support for this effect (e.g. Dabholkar *et al.*, 2009; Delgado-Ballester *et al.*, 2003; Garbarino and Johnson, 1999; Román, 2003), some literature supports that trust has a positive effect on satisfaction (e.g. Brashear *et al.*, 2003; Flaherty and Pappas, 2000). However, these studies supported this proposition within a context of manager–salesperson relationship. Dabholkar *et al.* (2009) also tested this proposition, yet their results show that the model with effects from trust to satisfaction was poorer than the proposed model (with effects from satisfaction to trust), both theoretically and empirically.

Over time, customers become attached to companies and identify with companies that they perceive as being both reliable and acting in their best interest (Fullerton, 2011). As result, satisfied customers will be more committed to the company relationship (Wetzels *et al.*, 1998). Based on the finds of Thureau and Klee (1997), satisfaction will positively influence commitment, when customers are satisfied and feeling pleased with the experience. However, Fullerton (2005) stress that is unlikely that a single satisfactory consumption experience will build commitment by itself, because commitment takes time to develop. So, only cumulative satisfaction may affect positively customer commitment.

Once a customer is satisfied, a higher level of engagement can be achieved, taking on the form of loyalty, commitment and WOM (van Doorn *et al.*, 2010). In the same way, Gustafsson *et al.*, (2005) confirmed the existence of a strong correlation between customer satisfaction and retention. Moreover, Shankar *et al.* (2003) argue that cumulative satisfaction can enhance loyalty in both the online and offline contexts. Therefore, Sashi (2012) stress the importance of interactions result in satisfaction, in order to the company and customer stay connected and the relationship progress to engagement.

Hence, cumulative satisfaction can be a potential CBE antecedent for experienced and/or existing customers and a consequence for experienced and/or existing customers (Brodie *et al.*, 2011; Hollebeek, 2011a). To date, the only empirical study stress that satisfaction should be treated as an antecedent of CBE in the context of mobile environment. However, the authors of the study, Dovaliene *et al.* (2016), also stress that more complex studies in this field are necessary.

4.8 Customer Trust

Trust plays a central role in maintaining and building a relationship (Lacey, 2007), since it leads to cooperation and reduce conflict in the customer-company relationship (Pentina *et al.*, 2013). Trust is also the most important variable in a relational exchange (Hunt and Lambe, 2000), since it reduces uncertainty in an environment in which customers feel vulnerable (Lacey, 2007). Customer trust influences choices and behaviors, because it is a psychological state interpreted in terms of “perceived probabilities”, “confidence” or “expectations” in relation to the other party (Delgado-Ballester *et al.*, 2003; Delgado-Ballester, 2004). As a result, trust is the belief in an exchange partner’s “reliability and integrity, credibility and benevolence, and word that an obligation will be fulfilled” (Hunt and Lambe, 2000, p. 30). Brand trust is “the willingness of the average consumer to rely on the ability of the brand to perform its stated function” (Chaudhuri and Holbrook, 2001, p. 82).

In this sense, trust is viewed as an essential element for successful relationships (Garbarino and Johnson, 1999) and is one of the factors that differentiate relationships from transactions (Story and Hess, 2006).

According to Morgan and Hunt (1994), trust only exists “when one party has confidence in an exchange partner’s reliability and integrity” (p. 23). This definition reflects two components: brand reliability and brand intentions. For Delgado-Ballester *et al.* (2003), brand reliability is the customer’s “perception that the brand fulfils or satisfies the consumer's needs” (p. 37), which means that the customer trusts in the honesty of the company (Geyskens *et al.*, 1996). In this sense, brand reliability is essential for trusting in a brand, because it represents the customer’s beliefs that the brand will accomplish its value promise (Delgado-Ballester, 2004). Consequently, customer will develop a positive brand attitude that becomes central to the repurchase decision (Morgan and Hunt, 1994) that leads the customer to be confident about the

occurrence of future satisfaction (Delgado-Ballester *et al.*, 2003). On the other hand, brand intentions “are based on the customer's belief that the brand would hold the customer's interest when unexpected problems with the consumption of the product arise” (Delgado-Ballester *et al.*, 2003, p. 38). In other words, the customer trusts in the benevolence of the company (Geyskens *et al.*, 1996). In this context, the credibility of information provided by the company and fellow users of the product, brand or brand's social networking page are crucial to build trust, as well as the integrity, competence, honesty, fairness and responsibility of the company (Morgan and Hunt, 1994).

In a customer-brand relationship context, customer trust reflects assumptions about reliability, honesty and altruism that customers attribute to brands (Story and Hess, 2006). This construct encompasses both cognitive and affective elements (Delgado-Ballester *et al.*, 2003). The cognitive dimension indicates a perception that the brand will meet expectations and respect its obligations (Chaudhuri and Holbrook, 2001), while the affective dimension is based on perceptions of honesty and altruism (Delgado-Ballester *et al.*, 2003).

According with literature, trust is a prerequisite to building customer relationships and a preceding state for the development of commitment (Morgan and Hunt, 1994; Garbarino and Johnson, 1999). Therefore, trust is capable of influencing customer commitment, customer long-term orientation and propensity to stay in a relationship, (Doney and Cannon, 1997).

In the relationship management literature, commitment is inextricably linked with trust (Morgan and Hunt, 1994). According to Morgan and Hunt (1994), both trust and commitment are necessary to produce outcomes that promote efficiency, productivity and effectiveness. Based on the Morgan and Hunt theory, Garbarino and Johnson (1999) consider trust as a precursor of commitment. In this sense, customers are less likely to be committed to the company unless trust is already established (Lacey, 2007). As commitment comprises a potential vulnerability and sacrifice, it is unlikely that customers commit themselves unless they already trust in the brand or company (Lacey, 2007). Additionally, trust directly influences relationship commitment, because trust between two parties helps reduce the vulnerability (Morgan and Hunt, 1994). Yet, Wetzels *et al.* (1998) test this hypothesis and concluded that there is a positive relation

between trust and affective commitment and a negative relation between honesty (brand intentions) and calculative commitment.

In addition, if customers have a strong relationship with a brand based on trust, they may participate in WOM for the motives of comfort and assurance or simply because they trust (Ranaweera and Prabhu, 2003). Barreda *et al.* (2015) suggest that trust positively influences customers' WOM when using online social networks pages and intentions to recommend brands. In a similar way, Hart and Johnson (1999) suggested that trust is likely to influence customer retention and WOM.

According to Story and Hess (2006), customer trust can transform customer-brand relationship into a relationship more emotionally and affectively oriented, instead of a relationship that is largely cognitive in nature and base on risk minimization and maximization of utility. Consequently, customers are more emotionally involved and less consciously weighing the benefits against the costs of the relationship (Wetzels *et al.*, 1998). However, Sashi (2012) argues that brand reliability may not be sufficient to turn the exchange into a long-term relationship for companies. Customers only expected to become engaged when they trust (Sashi, 2012), because the promise of what the brand represents to the market leads the customer to be confident about the occurrence of future benefits (Delgado-Ballester *et al.*, 2003). More recently, Islam and Rahman (2016) have empirically confirmed that in the context of brand communities on Facebook, when organizations engage customers, is more likely to customers enhance trust because customers rely more on the information from other customers than from the organization. Consequently, trust can be a potential CBE antecedent for existing customers (Bowden, 2009; van Doorn *et al.*, 2010) and a potential consequence for new and/or existing customers (Hollebeek, 2011a; Islam and Rahman, 2016).

4.9 Customer Commitment

According to Morgan and Hunt (1994), trust and commitment are the key relational constructs in the creation, development and maintenance of long-standing relationships between a company and its customers. And they are central factors because of their ability to lead indirectly to cooperative behaviors and produce outcomes that promote efficiency, productivity and effectiveness. Brand commitment is a psychological disposition that implies a positive attitude toward the brand and a willingness to maintain a valued relationship with it (Chaudhuri and Holbrook, 2001). Ultimately,

commitment is the customer's relationship disposition encompassing beliefs, attitudes and behaviors toward the brand and their relationship with that brand (Story and Hess, 2006).

Commitment is an implicit or explicit pledge to the continuity of a relationship between two partners (Wetzels *et al.*, 1998). It is "the degree to which an individual views the relationship from a long-term perspective and has a willingness to stay with the relationship even when things are difficult" (Thomson *et al.*, 2005, p. 78). So, Morgan and Hunt (1994) define commitment as "an exchange partner believing that an ongoing relationship with another is so important as to warrant maximum efforts at maintaining it; that is, the committed party believes the relationship is worth working on to ensure that it endures indefinitely" (p. 23).

In the relationship marketing literature, two main forms of commitment have been suggested: calculative or continuance commitment and affective commitment (Bowden, 2009; Fullerton, 2005; Gustafsson *et al.*, 2005). Both types of commitment are relatively stable attitudes and beliefs about the relationship that arise from different motivations for maintaining that particular relationship (Geyskens *et al.*, 1996).

Calculative commitment is rational and results from "economic-based dependence on product benefits due to a lack of choice or switching costs" (Gustafsson *et al.*, 2005, p. 211). In part, calculative commitment has its roots in switching costs, sacrifice, lack of choice and dependence (Fullerton, 2005). Consequently, the customer only has "rational bonds" or utility driven bonds with the service provider, brand and company (Bowden, 2009). This way, calculative commitment results from a cold calculation of costs and benefits, including an assessment of the investments made in the relationship and the availability of alternatives (Geyskens *et al.*, 1996). As a result, customers will only maintain their consistent purchasing behavior as long as the benefits attached to the object exceed the costs of switching to another (Amine, 1998). Therefore, calculative commitment is based on a cognitive/psychological evaluation of the instrumental worth of continued with the relationship (Wetzels *et al.*, 1998). This implies that the customer appears as seemingly loyal for opportunistic reasons (Amine, 1998). In this sense, Fournier *et al.* (1998) argue that the customer can feel trapped and react negatively towards the company. Only a few studies have examined the effect of calculative commitment on WOM referrals, but the results indicated that customers may react

against these feelings of entrapment by spreading negative word of mouth communication or failing to act as advocates (Harrison-Walker, 2001; Fullerton, 2005).

On the other hand, affective commitment is emotional and “develops through the degree of reciprocity or personal involvement that a customer has with a company” (Gustafsson *et al.*, 2005, p. 211). According to Bowden (2009), affective commitment is “the emotional expression of a customer’s psychological closeness to a brand” (p. 579). It is based on a sense of liking and emotional attachment to the relationship (Wetzels *et al.*, 1998). Therefore, affective commitment expresses “the extent to which an individual likes to maintain their relationship with an object on the basis of their affective attachment to and identification with this object” (Amine, 1998, p. 309). Customers when are affectively committed with a company, they like regardless of what is being consumed and they will recommend it to others (Bowden, 2009). In this sense, affective commitment has its base in shared values, trust and benevolence. For example, in brand communities, where customers share information with a brand, is clear that these customers have a deep attachment to the focal brand and for them the commitment-based relationship is the foundation of the community (McAlexander *et al.*, 2002). Consequently, affective commitment comes from a holistic judgment of the object in terms of liking or attachment, instead of an evaluation of the object on the disaggregate level of its attributes (Amine, 1998). Customers desire to continue the relationship, because they like and enjoy the partnership and the sense of belongingness (Geyskens *et al.*, 1996).

In the academic literature, engagement is said to be related to but distinct from other constructs. In this matter, it is important to stress the conceptual differences between the commitment dimensions and engagement (Bowden *et al.*, 2015; Saks, 2006). Customer commitment does not portray the same extent of interactivity, immersion, passion and activation that is apparent in engaged customers (Bowden *et al.*, 2015). In the same way, Saks (2006) stress that engagement contains elements of commitment, but commitment does not reflect sufficiently two aspects of engagement: its two-way nature and the extent to which engaged individuals are expected to have an element of business awareness.

Additionally, customers can express their experiences with or without emotional attachment towards the brand (Sashi, 2012). Regarding the different types of

communication (with or without emotional attachment), Sashi (2012) identifies two types of customers: delighted customers and loyal customers. Delighted customers are customers with a low relational exchange (low calculative commitment), but a high emotional bonds (high affective commitment) with the company. Despite not having a long-term relationship with the company, their expectations towards the company have been exceeded, inducing highly positive emotions and a high level of satisfaction. Therefore, customers have developed an affective commitment to the company that can make them talk about a product, brand or company. They may offer unsolicited encomiums and share their experience with other in their social networks. This is especially important in the actual digital age, where information and recommendations of other customers can be spread in minutes. By developing an enduring relationship with delighted customers, companies can turn delighted customers into fans (customers with high emotional bonds and high relational exchange). On the other hand, loyal customers are less prone to communicate their delight and, when they do so, they tend to do it in a way that is purely rational and free of emotional attachment. As a result, Fullerton (2011) proved that customer commitment is an important driver of WOM referrals, because commitment creates a kind of identification and attachment that lead the customer to engage in WOM communication. In same way, Ou *et al.* (2015) conclude that the higher the customer is committed, the more willing the customer is in providing word-of-mouth and recommendations for the business.

Therefore, commitment is often expressed in a context of entrenched psychological attachment (Bowden, 2009) and goes beyond of the mere involvement and interest (Warrington and Shim, 2000). Commitment implies importance of the relationship to the partner, a desire and a motivation to continue the relationship into the future. Despite being a specific attitudinal position on an issue that leads to long-term relationships, commitment does not translate necessarily into intimacy. However, it is the key mediator between the customer's evaluations of the company's performance and the customer's intentions regarding the future of relationship with that particularly company (Morgan and Hunt, 1994).

In this sense, affective commitment can lead to a greater desire to remain with the brand, a readiness to invest in the brand and a tendency to engage in positive WOM referrals (Wetzels *et al.*, 1998; and Harrison-Walker, 2001), whereas calculative

commitment can lead to customer loyalty (Sashi, 2012). These two kinds of commitment contribute to differentiate the motives underlying repeat purchasing behavior and could have various effects on the duration of the relationship (Amine, 1998). According to Amine (1998), affective commitment can ensure a longer term consistent behavior rather than calculative commitment since it depends less on contingent factors. Therefore, an emotional commitment is more likely to result in stable and enduring relationships.

In the psychological investment model, the two kinds of commitment are considered determinants of CBE in what concern investments in the relationship (Bügel *et al.*, 2010). Therefore, CBE requires both types of commitment, but only occurs when customers have strong emotional bonds (i.e. affective commitment). Hence, commitment can be a potential antecedent for existing customers (Bowden, 2009; van Doorn *et al.*, 2010) and a potential consequence for new and/or existing customers (Hollebeek, 2011a).

4.10 Conclusion

This section presented the sub-processes identified by the marketing literature as required or potential antecedents of the customer engagement. The importance of each sub-process will depend on the type of the object in study (product, service or brand) and the type of customer (new or existing customers).

Additionally, and based on the conceptual and empirical studies, the main and plausible relations among the different sub-processes was established. The majority of the relations found were studied under specific contexts or situations; therefore they are not directly generalizable to other contexts and need to be tested.

The following table summarizes the antecedents and relations found in the literature review.

Table 10 – Sub-processes; definitions, relationship to customer engagement and others constructs

Sub-process	Definition	Relationship to CBE	Relationship with the others constructs
Customer involvement	“a person’s perceived relevance of the object based on inherent needs, values and interests” (Zaichkowsky, 1985, p. 342).	Required antecedent (Brodie <i>et al.</i> , 2011, 2013; Hollebeek, 2011a; Hollebeek <i>et al.</i> , 2014; Leckie <i>et al.</i> , 2016; Wirtz <i>et al.</i> , 2013)	Customer participation (Godman <i>et al.</i> , 1995; Gordon <i>et al.</i> , 1998)
			Customer cumulative satisfaction (Olivia and Oliver, 1995; Shaffer and Sherrell, 1997)

Customer participation	“engaging customers as active participants in the organization's work or treating customers as ‘partial employees’” (Lengnick-Hall <i>et al.</i> , 2000, p. 364).	Required antecedent (Brodie <i>et al.</i> , 2011; France <i>et al.</i> , 2016; Hollebeek, 2011a; Mangold and Faulds, 2009)	Customer interactivity (Cheung and To, 2011; Ngo and O'Cass, 2013)
			Customer cumulative satisfaction (Auh <i>et al.</i> , 2007; Yen, 2005)
Customer interactivity	“as a psychological state experienced by a site-visitor during his or her interaction with a website” (Wu, 2006, p. 91).	Required antecedent (Hollebeek, 2011a; Leckie <i>et al.</i> , 2016; Vivek <i>et al.</i> , 2012)	Customer flow experience (Huang, 2003; van Noort <i>et al.</i> , 2012)
			Customer cumulative satisfaction (Ballantine, 2005; Liu and Shrum, 2002)
Customer flow experience	“a state of consciousness (usually characterized by a loss of a sense of time passing) that is sometimes experienced by individuals who are deeply involved in an activity they are enjoying” (Thatcher <i>et al.</i> , 2008, p. 2240)	Potential antecedent (Mollen and Wilson, 2010; Brodie <i>et al.</i> , 2011).	Customer cumulative satisfaction (O'Cass and Carlson, 2010; Hsu <i>et al.</i> , 2013)
Customer advocacy	“an advanced form of market orientation that responds to the new drivers of consumer choice, involvement and knowledge” (Lawer and Knox, 2006, p. 123)	Potential antecedent for existing customers of the company (Hollebeek, 2011a; Sashi, 2012)	Customer trust (Roy, 2013; Urban, 2004)
		Potential consequence for new and/or existing customers (Hollebeek, 2011a; Sashi, 2012)	Customer commitment (Roy, 2013; Urban, 2004)
Customer cumulative satisfaction	“all encounters of the customer-provider relationship” (Brunner <i>et al.</i> , 2008, p. 1097)	Potential antecedent for experienced and/or existing customers (Brodie <i>et al.</i> , 2011; Hollebeek, 2011a)	Customer commitment (Thurau and Klee, 1997; Wetzels <i>et al.</i> , 1998)
		Potential consequence for new customers (Brodie <i>et al.</i> , 2011; Hollebeek, 2011a)	Customer trust (Delgado-Ballester <i>et al.</i> , 2003; Garbarino and Johnson, 1999)
			WOM referrals (Eisingerich <i>et al.</i> , 2014; Fullerton, 2011)
Customer trust	“when one party has confidence in an exchange partner's reliability and integrity” (Morgan and Hunt, 1994, p. 23).	Potential antecedent for existing customers (Bowden 2009; van Doorn <i>et al.</i> , 2010)	Customer commitment (Garbarino and Johnson, 1999; Lacey, 2007)
		Potential consequence for new and/or existing customers (Hollebeek, 2011a)	WOM referrals (Barreda <i>et al.</i> , 2015; Ranaweera and Prabhu, 2003)

Customer commitment	“as an exchange partner believing that an ongoing relationship with another is so important as to warrant maximum efforts at maintaining it; that is, the committed party believes the relationship is worth working on to ensure that it endures indefinitely” (Morgan and Hunt, 1994, p.23)	Potential antecedent for existing customers (Bowden 2009; Van Doorn <i>et al.</i> , 2010)	WOM referrals (Fullerton, 2011; Sashi, 2012)
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Based on the literature review made on the previous sections, in the following (Section 5) the theoretical framework of the study and its research questions are developed.

5. Research questions and theoretical framework

5.1 Introduction

In this section, it is presented the research questions and the theoretical framework of the doctoral thesis.

Section 5.2 analyzes the gaps identified during the literature review, regarding the study of customer brand engagement (CBE) and its nomological network. Next, Section 5.3 identifies the research questions and Section 5.4 presents the theoretical framework.

5.2 Review of the gaps on the literature

In the current interactive and dynamic business environment, the long-term and sustainable competitive advantage of companies is tied to its capacity to retain, sustain and nurture its customer-base (McAlexander *et al.*, 2002). With the advent of social media, companies no longer can rely in a conventional relationship marketing only concerned with a linear customer-company and exchange-centric relationships (Vivek *et al.*, 2012). In this sense, customer brand engagement plays a key role in a new customer-centric marketing approach where the nature of the customer relationships is increasingly interactive and experiential (Keller, 2011). In consequence, customer engagement is considered a priority in branding strategies (Hollebeek, 2011a). The rationale underlying these assertions is that customer engagement represents a strategy for generating enhanced corporate performance, including sales growth, superior competitive advantage and profitability (Brodie *et al.*, 2011). However, managers are currently finding hard to practically achieve CBE (Gambetti *et al.*, 2015).

Rooted in the relationship marketing theory, CBE offers a further enhancement of the current theories about the customer-brand relationship (Fournier, 1998). Consequently, CBE was considered a key research priority (MSI, 2010; MSI, 2014). In addition, it has received an increasing attention in recent marketing literature (e.g. Journal of Service Research, 2010; Journal of Strategic Marketing, 2010; Journal of Product & Brand Management, 2014; Special Issue of the Journal of Marketing Management, 2016). In this sense, both from the academic and managerial point of view, CBE is considered the most desired quality in any customer-brand relationship (Baldus *et al.*, 2015; Brodie *et al.*, 2013; Dessart *et al.*, 2015, 2016; France *et al.*, 2016; Leckie *et al.* 2016; Maslowska *et al.*, 2016).

In this matter and based on the literature review presented in the sections 3 and 4, some gaps were identified in the literature. Despite being considered a fundamental driver in the customer decision-making process, CBE is still a recent concept in the marketing literature (Bowden, 2009; France *et al.*, 2016; Marbach *et al.*, 2016; Sprott *et al.*, 2009).

The majority of academic studies is conceptual and tends to focus on an individualist approach of the CBE concept (e.g. Baldus *et al.*, 2015; Kumar *et al.*, 2010; Sprott *et al.*, 2009). Some authors focus on one dimension of customer engagement, capturing most often its behavior dimension (e.g. Cambra-Fierro *et al.*, 2013; Kumar *et al.*, 2010; van Doorn *et al.*, 2010). While, others authors offer a perspective that includes affective and cognitive dimensions (e.g. Mollen and Wilson, 2010; Pham and Avnet, 2009). As a result, the studies offer a partial representation of CBE that neglects the analysis of its components. So far, only six quantitative studies take a broader perspective of customer engagement that includes a cognitive, an affective and a behavior dimension (Dwivedi, 2015; Greve, 2014; Hollebeek *et al.*, 2014; Leckie *et al.*, 2016; Vivek *et al.*, 2014; Yang *et al.*, 2016). In particular, Hollebeek *et al.* (2014) conducted an empirically investigation on the nature and dimensionality of CBE concept. And Dwivedi (2015) offers a holistic multi-dimensional measure of CBE and examines key nomological relationships that demonstrate the capability of CBE in explaining customer loyalty intentions.

Engaged customers play a key role in viral marketing activity, since they provide referrals and/or recommendations for specific products, services, and/or brands to others. Additionally, they can play an important role in the development of new product/service and in co-creation of experiences and value. As a result, the notion of engagement gained a particular depth in social media contexts thanks to their interactive nature (Gummerus *et al.*, 2012; Kaplan and Haenlein, 2010; Marbach *et al.*, 2016). Moreover, several authors strongly supported the relevance of studying customer engagement in online brand community context (e.g. Gummerus *et al.*, 2012; Kaplan and Haenlein, 2010; Ouwersloot and Odekerken-Schröder, 2008). However, the current insights into CBE process in social media are limited and few (empirical) studies have investigated factors explaining CBE in this context (e.g. Brodie *et al.*, 2013; Marbach *et al.*, 2016).

While the concept of CBE sounds very appealing, very little empirical evidence exists to show what antecedents lead to a strong CBE. The conceptual studies and the few empirical studies have not identified the drivers of CBE that may not only account for customers' motivations, but also explain customers' intentions to engage with brand. To date, there has been no single study that has taken a complete examination of all antecedents of CBE. For example, Brodie *et al.* (2011) described CBE as a central aspect in a nomological network but do not explain what the nomological network is.

Some studies have identified some constructs that may act as antecedents of CBE (Bowden 2009; van Doorn *et al.*, 2010; Brodie *et al.*, 2011, 2013; Hollebeek, 2011a; Mollen and Wilson, 2010; Sashi, 2012; Vivek *et al.*, 2012). However none of these studies explored the role played by all antecedents in CBE process. In the same way, Brodie *et al.* (2013), Hollebeek (2011a) and Leckie *et al.* (2016) have argued that customer involvement, customer participation and customer interactivity are antecedents required prior to the expression of CBE. But, once again, only a few empirical studies corroborated this idea. The study of Vivek *et al.* (2012) through a qualitative analysis validated customer involvement and customer participations as required antecedents of CBE, when the goal is to accomplished, as consequences of CBE, value, trust, affective commitment, word of mouth, loyalty and brand community involvement. In the same way, Leckie *et al.* (2016) tested the effect of customer involvement and customer participation as key drivers of CBE and brand loyalty as outcome of CBE in the context of Australian mobile phone service providers. The results reveal that customer involvement positively impacts the three dimensions of CBE (cognitive processing, affection and activation), while customer participation only positively influences cognitive processing. On the other hand, the study of Hollebeek *et al.* (2014) only confirmed customer involvement as required antecedent of CBE.

Besides, marketing literature is mainly focused in the questions related with the outcomes of CBE. By doing so, it is neglecting the analysis of its drivers that can enhance CBE and the moderators that can have an important role in improving or reducing the impact of the drivers on CBE.

Despite the significant recent interest in CBE, inconsistencies and limitations remain in the CBE theory with regard to the CBE analysis and its antecedents (Hollebeek *et al.*, 2014; Dessart *et al.*, 2015; Leckie *et al.*, 2016). Consequently, more empirical evidence

is required to provide a coherent picture of how CBE works (Dovaliene *et al.*, 2016; Gambetti *et al.*, 2015). Therefore, there is an opportunity to gain a better understanding on a field of study that still remains unexplored in the literature and has practical relevance for managers.

5.3 Research Questions

Given the gaps found in literature, the main purpose is to move beyond domain-specific findings and individual brand constructs, i.e., to move beyond the analysis of case studies that only addresses one brand and a partial representation of the CBE nomological network. In this sense, the purpose is to identify the key brand constructs related to the CBE process and integrate them into a comprehensive model. So, by examining its antecedents and testing whether and how they impact CBE, identify and examine precisely which factors may be essential in the CBE process. In order to accomplish this goal, three research questions were formulated:

- What are the main drivers of CBE?
- What are the factors that directly and indirectly influence the CBE process?
- What moderating effects are expected to occur in the CBE process?

These research questions require (i) the identification of the required and potential antecedents of the CBE process; (ii) the understanding of potential direct and indirect impacts; (iii) the examination of possible moderating effects, the effect of customer's gender and the type of brand perceived by the customer on the nomological network of CBE. In this sense, the first research question aims to detect the main drivers to accomplishing CBE *per se*. By this manner, it turns possible to identify what are the main emotional, cognitive and behavior constructs in the CBE process. The second research question purposes to clarify the interactions between the CBE drivers identified by the first research question, as well as integrate them into a comprehensive model. After these analyses, the third research question aims to test the moderating effect of customer's perceived brand reputation, customer's perceived brand knowledge, customer's identification with the social networking site and trust towards it. In the same way, the final model is expected to differ for different customer's gender and type of brands.

In order to answer these research questions, Section 5.4 presents the theoretical model and its dimensions of analysis.

5.4 Theoretical framework

The structural model implied by the relationships hypothesized in this subsection is shown in Figure 2. The model presented in the Figure 2 is divided into two parts, designed to address the first and the second research question.

As CBE drivers are not sufficiently explored in the marketing literature, hence the first part of this model aims to investigate the direct effects of all antecedents identified during the literature review in CBE. In other words, it intends to test the following hypotheses: H1, H3, H5, H7, H9, H11, H12 and H14.

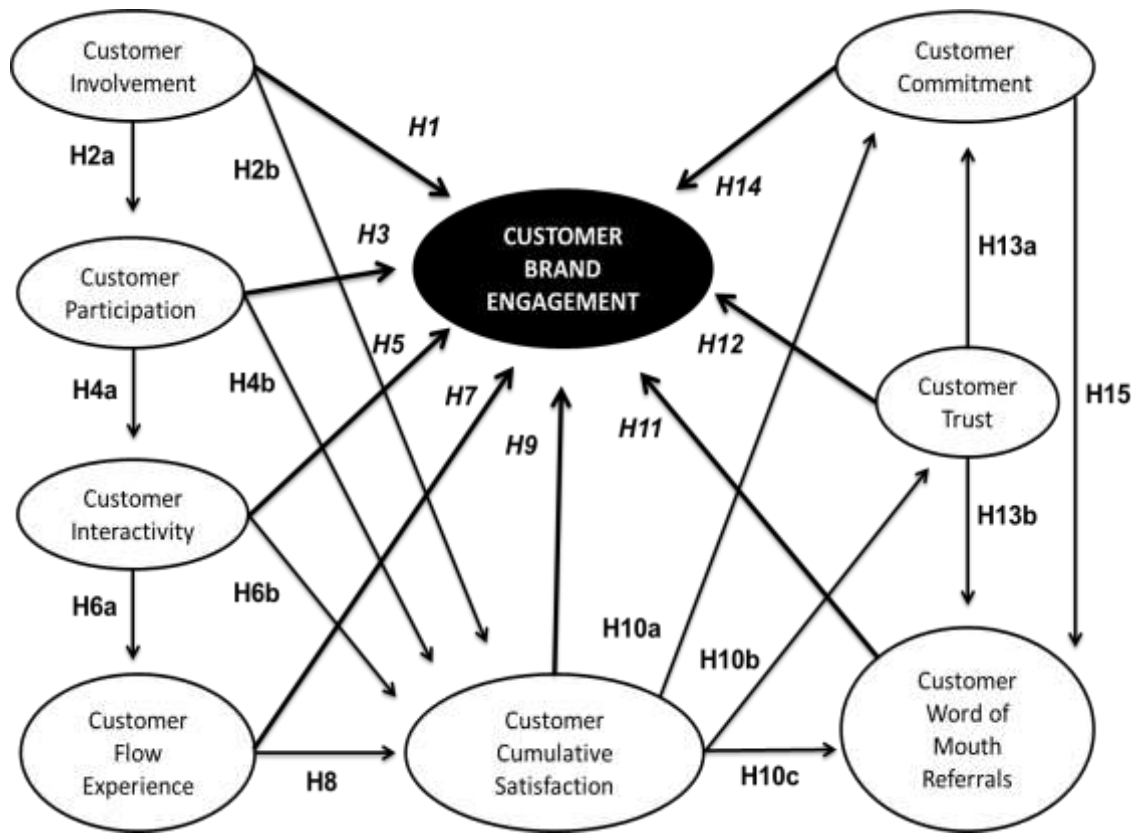
From the eight CBE antecedents identified by previous studies, this doctoral thesis addressed seven antecedents, leaving aside customer advocacy. During literature review, it was identified a conceptual overlap between the concepts of customer advocacy, customer interactivity and customer participation. Hence, and in order to avoid possible halo or multicollinearity problems, the concept of advocacy was excluded. However, and taking in account the four customer advocacy behaviors identified by Lacey and Morgan (2009), customer word-of-mouth referrals was included in the model as potential CBE antecedent.

Hence, the model incorporated the following CBE antecedents: customer involvement, customer participation, customer interactivity, customer flow experience, customer cumulative satisfaction, customer trust, customer commitment and customer word-of-mouth referrals.

After testing the direct effects, in order to answer to the second research question, the study tested the remaining hypotheses. In addition to the analysis of the direct and indirect effects, the model also includes as moderators the following items: customer perception of the brand reputation; customer's perceived knowledge about the brand, customer's trust and customer's identification with the social networking site (Facebook).

Therefore, in order to answer to research questions 1 and 2, the following research theoretical model and hypotheses are proposed (Figure 2):

Figure 2 – Theoretical Model



Broadly, involvement can be described as the customer's personal relevance and interest in relation to a focal object. In this sense, customers with high levels of involvement are more likely to exhibit engagement (Vivek *et al.*, 2012) regarding thoughts, feelings and behavioral to a particular object (Gordon *et al.*, 1998). Therefore, Brodie *et al.* (2011, 2013), Hollebeek (2011a, 2014), Leckie *et al.* (2016) and Wirtz *et al.* (2013) argue that customer involvement is an antecedent required prior to the expression of CBE.

Additionally, when customers are involved, they are open to invest time and energy in the co-production of contents for the brand (Goodman *et al.*, 1995; Gordon *et al.*, 1998). In this sense, customers only participate in the brand, if they see the future benefits of the relationship (Gronroos, 1995).

In the same way, when involved customers experience satisfaction or dissatisfaction, they may interpret that particular experience as a result of their personal investment

(Goodman *et al.*, 1995). Consequently, this particular experience has repercussions on the cumulative satisfaction of the customer (Olivia and Oliver, 1995).

Therefore, the following hypotheses are posited:

Hypothesis 1: Customer involvement has a positive effect on CBE.

Hypothesis 2a: Customer involvement has a positive effect on customer participation.

Hypothesis 2b: Customer involvement has a positive effect on customer cumulative satisfaction.

Through participation, customers become effective co-producers of the brand, since their participation directly influences the perception of the quality and behavioral outcomes of other customers (Bolton and Saxena-Iyer, 2009). This kind of participation includes the consuming, contributing and creating of brand-related content (Muntinga *et al.*, 2011). Consequently, customers will be able to better know the brand, to adjust their expectations and to have a stronger perception of customization and cost reductions. As a result, customers who participate tend to take part of an interactive process that conducts to a greater customer's engagement (Vivek *et al.*, 2012). Customer may feel as a member of the brand and by this way enjoy feelings of confidence, pride and passion in a brand (Cheung and To, 2011). Therefore, Hollebeek (2011a), Leckie *et al.* (2016) and Vivek *et al.* (2012) argue that customer participation is an antecedent required prior to the expression of CBE.

Additionally, customer participation implies a constant dialogue, which can help to develop and enhance the relationship between the customer and the brand (Cheung and To, 2011). As a result, customer participation allows a more effective, efficient and constructive dialogue between the parties (Ngo and O'Cass, 2013).

Moreover, participation will produce an experience that is pleasant and meets their needs (Lengnick-Hall *et al.*, 2000). Therefore, customers are more likely to make a favorable assessment of the brand, which in turn may lead to a higher customer satisfaction (Auh *et al.*, 2007; Yen, 2005).

Hence, the following hypotheses are proposed:

Hypothesis 3: Customer participation has a positive effect on CBE.

Hypothesis 4a: Customer participation has a positive effect on customer interactivity.

Hypothesis 4b: Customer participation has a positive effect on customer cumulative satisfaction.

Customer interactivity is a psychological state of mind experienced by an individual during interaction (Wu, 2006). According to Mangold and Faulds (2009), customer interactivity can enhance the relationship between the customer and the brand, because customers are able to submit feedback. This more frequent, faster and richer interaction among customers and between the customer and the company enhances the feeling of being engaged with the brand (Sashi, 2012). Consequently, Hollebeek (2011a) considers interactivity as a required antecedent of CBE in her conceptual model.

In the same way, interactivity increases the feeling of “having control” over the interaction, stimulates user’s curiosity and makes navigation intrinsically interesting (Novak *et al.*, 2000). These are key dimensions of flow experience (Huang, 2003). Therefore, higher levels of interactivity should lead to more powerful flow experiences (van Noort *et al.*, 2012).

In addition, customer interactivity enhances the subjective feeling of “having control”, which can reduce frustration and unpleasant feelings. In this sense, the sensation of having control of their experience can result in an increasing of customer satisfaction (Ballantine, 2005; Devaraj *et al.*, 2002). Likewise, the feeling that their opinion is heard can result in a more satisfying experience (Liu and Shrum, 2002).

Thus, the following propositions are hypothesized:

Hypothesis 5: Customer interactivity has a positive effect on CBE.

Hypothesis 6a: Customer interactivity has a positive effect on customer flow experience.

Hypothesis 6b: Customer interactivity has a positive effect on customer cumulative satisfaction.

Flow experience has become a key element to measure the extent and intensity of the pleasure, and the concentration of customers during their online experience (Novak *et al.*, 2000). Therefore, flow is an unconscious experience in which the individual is completely focused and enjoying the activity that is developing (Liu *et al.*, 2016). In this sense, customers who experience flow state exhibit more rich and interactive

experiences, which can lead to a higher degree of pleasure and connection with the brand (Mollen and Wilson, 2010). Consequently, they are more likely to perceive their experience as compelling and become engaged with the brand (Novak *et al.*, 2000). Thus, customer flow experience may act as an antecedent of CBE (Mollen and Wilson, 2010; Brodie *et al.*, 2011).

As flow positively increases customer perceptions of positive moods, pleasure and connection with the brand, it can also affect customer satisfaction (O'Cass and Carlson, 2010; Hsu *et al.*, 2013). Similarly, focused attention helps the process of information flow, leading to wiser decisions and a higher user satisfaction (Ghani and Deshpande, 1994).

So, it is assumed that:

Hypothesis 7: Customer flow experience has a positive effect on CBE.

Hypothesis 8: Customer flow experience has a positive effect on customer cumulative satisfaction.

Customer cumulative satisfaction represents the results of all encounters between the customer and the brand (Brunner *et al.*, 2008). As customers rely on their experiences to form intentions, customer cumulative satisfaction allows predicting future customer's intentions and behaviors (Olsen and Johnson, 2003). In this sense, customer satisfaction can not only affect the customer cognition and emotional attachment towards the brands, as it can also affect long-term customers' behaviors, such as willingness to enhance the relationship (Morgan and Hunt, 1994; Fullerton, 2011). Once a customer is satisfied, the relationship between the customer and the brand can progress to engagement (Sashi, 2012). Hence, cumulative satisfaction can be a potential CBE antecedent for experienced and/or existing customers (Brodie *et al.*, 2011; Hollebeek, 2011a).

Cumulative satisfaction has a strong effect on the perception of quality and price equity and contains a significant affective component (Gustafsson *et al.*, 2005). Subsequently, in response to favorable consumption experiences, satisfaction can generate trust and contribute to build commitment over time (Delgado-Ballester *et al.*, 2003; Garbarino and Johnson, 1999; Morgan and Hunt, 1994). For some authors, customer trust is the aggregate evaluation of customer satisfaction (Ou *et al.*, 2015). In

addition, when customers are satisfied and feeling pleased with the experience, they will commit with the brand (Thurau and Klee, 1997; Wetzels *et al.*, 1998).

Additionally, satisfying experiences can lead customers to express themselves positively about the brand and act as promoters of the brand (Fullerton, 2011). Furthermore, customers whose expectations have been met and exceeded are eager to share their experience (Eisingerich *et al.*, 2014).

Therefore, the following hypotheses are postulated:

Hypothesis 9: Customer cumulative satisfaction has a positive effect on CBE.

Hypothesis 10a: Customer cumulative satisfaction has a positive effect on customer trust.

Hypothesis 10b: Customer cumulative satisfaction has a positive effect on customer commitment.

Hypothesis 10c: Customer cumulative satisfaction has a positive effect on customer WOM referrals.

WOM referrals are all statements made by the customers about the brand (Hennig-Thurau *et al.*, 2004). In this sense, WOM referrals play an important role in influencing customers' decision, since WOM referrals are identified by them as trustworthy (Wolny and Mueller, 2013) and meaningful (Mazzarol *et al.*, 2007). As a result, customer's positive WOM referrals can contribute to CBE (Hollebeek and Chen, 2014).

The act of recommending something to others is the key element of a strong relationship and a behavior undertaken by customers who are actively, emotionally and attitudinally connected with the brand (Hollebeek and Chen, 2014). As a result, WOM communication plays an important role in shaping customers' attitudes and behaviors (Brown and Reingen, 1987). Likewise, it is beneficial in increasing brand engagement and relevance (Chu and Kim, 2011).

Therefore, it is expected that:

Hypothesis 11: Customer WOM referrals have a positive effect on CBE.

The central role of maintaining and strengthening a relationship is played by trust (Lacey, 2007). Customer trust may transform the customer-brand relationship into a more emotionally and affectively relationship and less cognitive in nature (Story and

Hess, 2006). Customers only expected to become engaged with the brand when their perception is that brand fulfils their needs (brand reliability) and their belief is that the brand would hold their interest (Sashi, 2012). Therefore, trust can be a potential CBE antecedent for existing customers (Bowden 2009; Van Doorn *et al.*, 2010).

Trust directly influences relationship commitment, since it helps reducing the vulnerability (Morgan and Hunt, 1994). In this sense, it is unlikely that customers commit themselves with a brand unless they already trust in it, because commitment comprises vulnerability and sacrifice (Lacey, 2007).

In the same way, customers are less likely to recommend a brand to other people if they do not trust in the brand (Barreda *et al.*, 2015; Hart and Johnson, 1999). When customers trust, they may participate in WOM for the motives of comfort and assurance or simply because they trust (Ranaweera and Prabhu, 2003).

Therefore, the following hypotheses are formulated:

Hypothesis 12: Customer trust has a positive effect on CBE.

Hypothesis 13a: Customer trust has a positive effect on customer commitment.

Hypothesis 13b: Customer trust has a positive effect on customer WOM referrals.

Commitment is an implicit or explicit pledge to the continuity of a relationship (Wetzels *et al.*, 1998). In this sense, commitment is often expressed in a context of entrenched psychological attachment (Bowden, 2009). Consequently, it is more likely that the connection between the customer and the brand results in a stable and enduring relationship (Bügel *et al.*, 2010). Therefore, CBE requires both types of commitment, but it only will occur when customers have strong emotional bonds (i.e. affective commitment). Hence, commitment can be a potential antecedent for existing customers (Bowden, 2009; Van Doorn *et al.*, 2010).

Customers who are committed to a particular brand are more likely to recommend the brand to people that they care about, because they feel comfortable and pleased with it (Sashi, 2012). As a result, the more customers are committed, the more they are willing to engage in WOM referrals (Fullerton, 2011; Ou *et al.*, 2015).

In this sense, the following propositions are hypothesized:

Hypothesis 14: Customer commitment has a positive effect on CBE.

Hypothesis 15: Customer commitment has a positive effect on customer WOM referrals.

Additionally, the customer as an integral part of the CBE process (Algesheimer *et al.*, 2005; Gambetti *et al.*, 2015) cannot be ignored and some individual-level factors are considered in this study as factors that may improve the causal effect of the drivers. Therefore, in order to answer to the third research question, the following hypotheses are formulated.

The customer's perception about the brand reputation is the result of the cumulative effect of all past and present marketing activities (Bang *et al.*, 2014), and the customers' perception of its quality (Selnes, 1993). In this sense, brand reputation in itself is an assessment of its value, as a result customers are more likely to invest and have positive attitudes toward brands with high-reputation (Bang *et al.*, 2014; Chaudhuri, 2002). Hence:

Hypothesis A: Customer's perceived brand reputation moderates the effect of the drivers on CBE

Knowledgeable customers respond to marketing activities and to brands in a different way, since they are more involved with the brand and its social networking site (Algesheimer *et al.*, 2005; Esch *et al.*, 2006; and Keller, 2003). Additionally, this type of customer is more likely to assume a leadership role in the social networking site (Algesheimer *et al.*, 2005). Lacey (2007) also argues that knowledge about the brand can be important when brands do not have competitive differentiation. Thus:

Hypothesis B: Customer's perceived brand knowledge moderates the effect of the drivers on CBE

The customer's identification with the social networking site translates the customer's perception of belonging to a particular group (Bhattacharya *et al.*, 1995), in terms of self-awareness, perceived similarities with the community and emotional involvement with the group. Consequently, customer's identification contributes to higher levels of individual customer intentions and behaviors towards the brand (Bhattacharya *et al.*, 1995; Dholakia *et al.*, 2004; Füller *et al.*, 2008). So:

Hypothesis C: Customer's identification with the social networking site moderates the effect of the drivers on CBE

According to Bruhn *et al.* (2014), trust in the social networking site is a factor that can develop and facilitate relationships exchange, since trust results of the sense of safety, security and trustworthiness (Casaló *et al.*, 2008). So, trust contributes to reduce the perceived risk and to enhance the cooperative behavior (Bruhn *et al.*, 2014; Casaló *et al.*, 2008). In the same way, trust influences the customer behavior, in terms of the member's intentions to maintain the tie, to recommend (Pentina *et al.*, 2013) and to participate in the virtual social network brand communities (Tsai and Men, 2013). Subsequently:

Hypothesis D: Customer's trust towards the social networking site moderates the effect of the drivers on CBE

Fournier (1998) emphasizes that in a context of customer's brand relationships, women exhibit stronger interpersonal relationships and brand involvements comparing to men. Moreover, women have a higher preference of social networking (Kuss and Griffiths, 2011; Salehan and Negahban, 2013), because they are socially oriented (Lee *et al.*, 2014). In the same sense, they have the ability to transform brand commodities into symbolic markers of cultural categories (Fournier, 1998). Therefore:

Hypothesis E: Customer's gender influences the nomological network of CBE.

Customers discriminate between competing offers by the degree of representationality and functionality expressed by a particular brand (Chernatony and McWilliam, 1989; Dhar and Wertenbroch, 2000). Consequently, managers and marketers invest and promote their brands in order to position themselves accordingly (Hartmann *et al.*, 2005). Functional brands aim to satisfy customer's utilitarian needs, as a result their value have to do with their convenience, performance, functional capabilities and physical attributes (Chernatony, 1993). On the other hand, brands which are predominantly representational are built on the idea that customers use brands to help them to express something about themselves (Chernatony and McWilliam, 1989). Therefore, the promotional strategy of these brands favors the communication of

the type of person who would use the brand, since customers are motivated by behavioral factors related to personal connections, beliefs about brand motives, the role of the brand in self-definition and importance of the relationship (Chernatony, 1993; Keller, 2003; Brito, 2010). Thus:

Hypothesis F: The type of the brand perceived by the customer influences the nomological network of CBE.

5.5 Conclusion

Given the gaps found in literature review, the research has as goal to develop a theoretical model that move beyond the analysis of individual brand constructs and the examination of a partial representation of the CBE nomological network. In this sense, the theoretical model integrate the key brand constructs related to the CBE process, allowing to identify and examine precisely which factors may be essential in the CBE process.

Therefore, the theoretical model contemplates three dimensions of analysis: (i) the identification of the required and potential antecedents of the CBE process; (ii) the understanding of potential direct and indirect impacts; (iii) the examination of the moderating effects of customer's perceived brand reputation, customer's perceived brand knowledge, customer's identification with the social networking site and trust towards it, the effect of customer's gender and the type of brand perceived by the customer on the nomological network of CBE.

In the next sections, the characterization and relevance of the study context (Section 6), as well as the main determinantes of the methodological options and the operationalization of data are presented (Section 7).

6. Characterization and relevance of the study context

6.1 Introduction

After explaining the theoretical framework of the doctoral thesis, this section aims to present the study context.

Thus, the Section 6.2 presents the Facebook's presence Worldwide and particularly in Portugal. Additionally, Section 6.3 shows the main characteristics of Facebook and the objectives that were in the basis of its implementation.

6.2 Facebook: history and presence

From a marketing perspective, social networking sites are particularly relevant when they are focused on specific brand, product or company, forming the so-called brand community in which customers can participate (Hassan and Ariño, 2016). This type of participation strengthens customer relationships with the brand, other customers (McAlexander *et al.*, 2002) and enhances customer engagement (Brodie *et al.* 2013; Dessart *et al.*, 2015, 2016; Malhotra *et al.*, 2013). Therefore, marketers place very high value on social media (Stelzner, 2016).

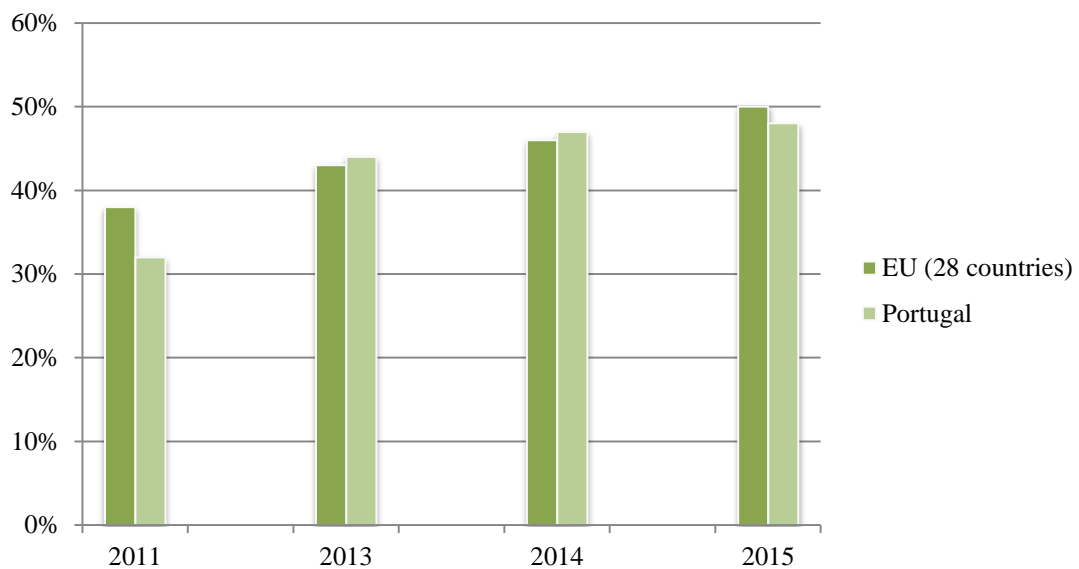
In terms of the social networking history, the first social networking site was SixDegrees (Lee *et al.*, 2014). Launched in 1997, this social networking site was created based on “the idea that everybody is linked with everybody else via six degrees of separation” (Kuss and Griffiths, 2011, p. 3529). In February 2004, the most successful current social networking site was established as a closed virtual community for Harvard students (Kuss and Griffiths, 2011; Salehan and Negahban, 2013). Nowadays, Facebook is operated and privately owned by Facebook, Inc. and is the third most visited site in the world (Alexa Rank, 2016; Quantcast, 2016). This statistic alone indicates the exponential appeal of this social networking site that can be traced back to its reflection of today's individualist culture (Kuss and Griffiths, 2011; Lee *et al.*, 2014).

Worldwide, on average for June 2016, there was 1.13 billion daily active Facebook users and 1.71 billion monthly active Facebook users (Facebook, 2016). Approximately, 84.5% of the daily active users are outside Canada (the country with the most active Facebook users) and US (Facebook, 2016). Facebook adds 500.000 new users every day and 6 new profiles every second (Brandwatch, 2016). According with the latest data

(DMR, 2016b), users spend on average more than 20 minutes on Facebook, have on average 338 friends and 91% of the users aged between 15 and 34 years (millennials users). 49% of users like a Facebook page to support a brand that they like (Brandwatch, 2016).

One of the most common online activities in the EU-28 in 2015 was participation in social networking. Half of individuals aged 16 to 74 used the internet for social networking, such as Facebook or Twitter (Eurostat, 2015). In Portugal, nearly half (48%) of individual participate in social networking sites (Eurostat, 2015).

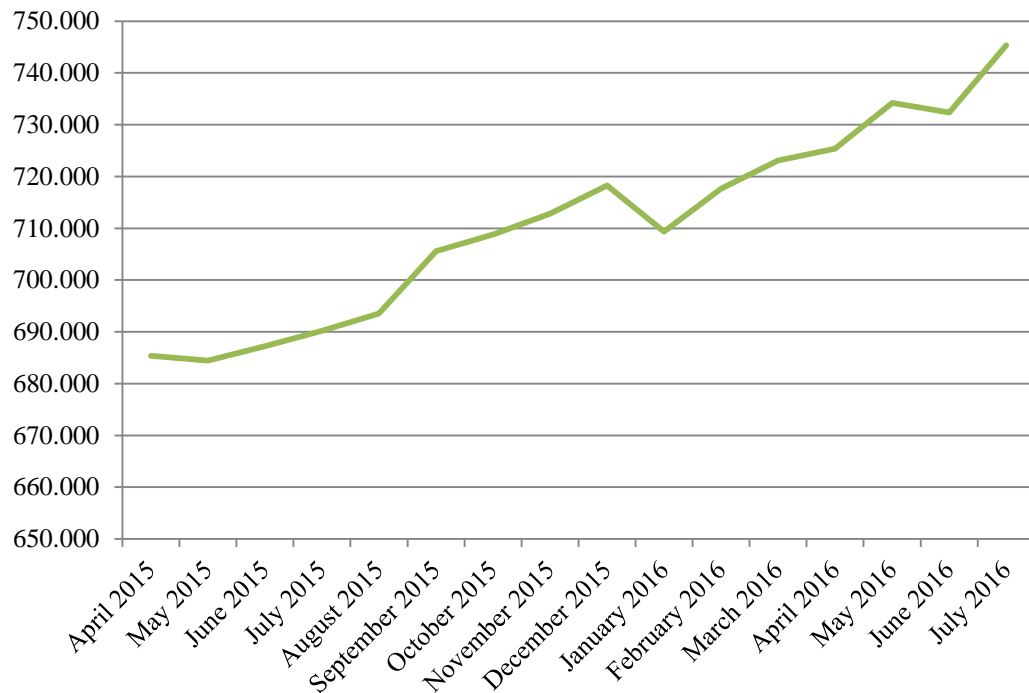
Figure 3 - Individuals using the internet for participating in social networks (% of individuals aged 16 to 74, 2015)



Source: Eurostat (2015)

According to Marktest (2015), 94% of social networking users have an account on Facebook, 69% follow brands on social networks and 13% consider that be a follower or a fan of a company or brand on social networks has a lot of influence on their purchasing options. Latest data indicates that the top 20 brands in Portugal have on average 745.332 fans/followers, 102.723 interactions and a response rate of 73% (Socialbarkers, 2016).

Figure 4 – Average of number of fans/followers of the 20 top brands in Portugal



Source: Socialbarkers (2016)

These data reaffirms the importance and benefits for companies to be present on Facebook and take advantage of this social media marketing channel. According to Stelzner (2016), Facebook and YouTube hold the top spots for future plans. At least 63% of marketers plan on increasing their use of these social networks. Moreover, major findings indicate that tactics and engagement are top areas that marketers want to master. At least 90% of the marketers want to know the most effective social tactics and the best ways to engage their audience with social media and only 34% acknowledges that their Facebook efforts are effective.

6.3 Facebook as a channel for digital marketing activities

Broadly, Facebook consists of “a series of interrelated profile pages in which members post a broad range of information” (Wilson *et al.*, 2012). An explanation for the leading position of Facebook is its diverse applications and its perpetual development mode, in which engineers continuously develop new features and make them available to users (Treadaway and Smith, 2010). By selecting appropriate

functions or combining all functions, companies can use Facebook to find and create their own network in the site.

In this sense, Facebook is referred as a powerful social media channel for digital marketing activities (Lee *et al.*, 2014), and a way for companies to easily reach a broader target audience. Facebook have a large number of brand community sites managed by the companies since it allowed companies to register personal or corporate account (Hassan and Ariño, 2016).

Currently, Facebook has 50 million active small business pages, but only 2.5 million of those businesses pay to be an “active advertisers” (Brandwatch, 2016). Between 2015 and 2016, “active advertisers” increase 50% (DMR, 2016a). Additionally, 75% of brands pay to promote their posts. On average advert click through rate on Facebook is 0.9%, although adding a CTA button can lift click-through-rate by 2.85 times (Brandwatch, 2016). Despite only making up 3% of Facebook content, videos have the highest rate of engagement. Similarly, posts published on Thursday and Friday receive the highest engagement rate (Brandwatch, 2016).

In the particular case of Facebook, companies create brand communities and produce content to engage their followers, who consequently have at their disposal several ways to interact with a brand post. As a matter of fact, Facebook users can express their feelings, share their opinions as well as their consumption experiences with other users, mainly through post comments, shares and likes. These users’ interactions appear on company’s Facebook page and on the content producer newsfeed and are also exposed on the newsfeed of some of their Facebook friends, based on their affinity score. (Brettel *et al.*, 2015).

For companies, Facebook has several features (Table 11) that allow to companies to raise brand awareness, and to encourage users to visit the company’s landing page and ultimately subscribe their services (Brettel *et al.*, 2015; Hsu, 2012).

According to Hsu (2012), Facebook features can be primary features and supporting features. The primary features provide the main e-Marketing and viral marketing functionality for companies. In other words, it comprises the features that companies can use to find and understand the needs of its target market, connect and build a network within the target market, share information, communicate, and influence people in its network to spread the message. For instance, the information shared by companies

is seen by users in the “news feed”, can be republished by them on the “Timeline”, can be sent via private “message” or users can simply “tag” their friends in the comments of the brand’s posts. In this sense, the “Profile” and “Fan page” are the central hub where up-to-date information, photos and videos are chronological displayed. Regarding Facebook applications, they are also many and diverse. For example, in 2014, Facebook introduced calls-to-action buttons and companies can choose from a group of action such as “Sign Up”, “Subscribe”, “Learn more”, “Buy” (added in 2016), “Contact us” or “Download”. The more recent applications are the Facebook live video (so far only available to public figures, but Facebook expects to expand the service to more users and brands) and Instant articles (a feature that allows publishers to have their content distributed and viewed directly within the Facebook app).

On the other hand, supporting features provide assistance in implementing primary features and customization options (e.g. language options, network parameter selection, and mobile connectivity).

Moreover, a major advantage of Facebook as a digital marketing communication channel is its algorithm (EdgeRank). Its algorithm is capable to choose which users will see the company’s ads and others non-sponsored posts, in other words the algorithm is able to select which users will be exposed to brand posts. In fact, Facebook knows that users who have previously interacted in some way with the brand are the ones that will probably be more interested with its content, and therefore will enhance the impact and cost-effectiveness of advertising campaigns (Facebook for business, 2016).

Furthermore, when a target user interacts with a certain brand post and shares its content with his friends, Facebook knows that probably the users that will engage more with that post are the ones that share similar interests and characteristics with the target user, and consequently have a higher affinity score with that person.

Table 11 – Primary and supporting Facebook features

PRIMARY FEATURES	
Profile	Establish presence in Facebook; share company product and service information; communicate and share marketing message; establish business distinction; reinforce brand using logos as profile picture; establish network connections
Fan page	Share company, product or service information; communicate and share marketing message; expand network; get feedback updates
Group	Communicate and share marketing message; participate in discussions over common interests; identify and connect to niche markets sharing specific interests
Event	Communicate and share marketing message; influence interest and involvement in sponsored or promotional events; encourage sharing and group participation
Advertisement	Reach out to a wider pool of Facebook users; establish network connections through links and ‘like’ options with clicks appearing on the page of all friends
Beacons and Polls	Keep track of page activity, network growth, and feedback updates
Applications	Facilitate promotions and interactive communication and sharing of marketing message
SUPPORTING FEATURES	
Statistics	Learn trends on customer behavior, site activity, global reach and connectivity
Press releases	Know about Facebook and Facebook community developments such as on network or business interests
Speaker requests	Request speakers to seminars or meetings in business firms or organizations to discuss Facebook and its marketing features
Help center	Obtain assistance on understanding and using Facebook features as well as troubleshooting
Network customization	Search and identify parameters of network connectivity to access target markets
Primary language options	Support connectivity to a target market through a common language and cultural characteristics
Mobile connectivity	Enable Facebook connectivity and updates via mobile Internet

Source: Hsu (2012, p. 975)

6.4 Conclusion

Social networks have seen their popularity grow exponentially all over the world. As previously mentioned, Facebook is the largest social network worldwide and the preferred social networking site for customers to engage with brand. Therefore, the choice of Facebook as the study context is due to the fact that it is the digital marketing channel most commonly used by the companies. Furthermore, Facebook is the most used social network in Portugal (Marktest, 2015). Social network sites such as

Facebook also enable the megaphone effect (Brettel *et al.*, 2015). Moreover, Facebook users can engage and interact with a brand post, namely through comments, shares, or other user contributions, rapidly spreading the firm's content through his or her network, also known as Facebook friends. This confers a viral reach to company's content.

In the following Chapter, the methodology and results of the empirical research are presented and analyzed.

CHAPTER II

EMPIRICAL RESEARCH

7. Methodology

7.1 Introduction

This section aims to explain and justify the methodological choices that guided the empirical research of this doctoral thesis.

Section 7.2 describes the main determinants of these options and Section 7.3 describes and justifies the research strategy followed. Then in the Section 7.4 is presented the issues regarding the operationalization of the methodology (access to data, data collection and data analysis). Finally, Section 7.5 sums up the main methodological options.

7.2 Determinants in the choice of the methodology

The methodological options of this doctoral thesis were based on two types of determinants: theoretical framework, discussed in Subsection 7.2.1; and the research objectives and questions, which are explained in Subsection 7.2.2.

7.2.1 Theoretical framework

The literature review enables the investigator to identify previous research and discover black holes or white spots in it (Strauss and Corbin, 1998). Additionally, literature helps to delineate important variables, suggests relationships among them and direct interpretation of findings. Based on these findings, it is possible to propose a theoretical and conceptual framework.

The “preliminary analytical framework consists of articulated preconceptions” (Dubois and Gadde, 2002, p. 555), which should be developed according to what is discovered through analysis, interpretation and empirical work. In the case of this doctoral thesis, the theoretical framework used to analyze the interactions between the customer and the brand focused primarily on the marketing literature. Nonetheless, the research also used concepts and tools from others fields of study, such as psychology, customer behavior, customer psychology, organizational psychology and computers in human behavior. The combination of different sources of information allowed to identify the most important variables to this study and to relate variables in hypotheses.

Moreover, the literature review showed that there are a variety of studies using an essentially conceptual methodology (e.g. Brodie *et al.*, 2011; Higgins and Scholer,

2009; Mollen and Wilson, 2010; Pham and Avnet, 2009) or qualitative methodology (e.g. Brodie *et al.*, 2013; Hollebeek, 2011b; and Vivek *et al.*, 2012). Indeed, these studies have adopted a more descriptive than explanatory or exploratory approach of the subject under study, leaving several questions unanswered. Additionally, most research on CBE focuses on a specific brand (e.g. mobile phone service brands).

Acknowledging that the human behavior cannot be conceptualized or explained, this investigation followed a deductive process base on the data collected from the literature review. This deductive approach allowed developing propositions from current theory and making them testable. Moreover, this deductive process allowed integrating all antecedents of CBE into an analytical model for future empirical investigation. During this process, the concepts and the relationship between them have been frequently revised and reformulated.

7.2.2 Objectives and research questions

The goals and research questions determine to a large scale the research methods that are used to answer it.

According to Yin (2009), opting for a strategy over another should be performed based on the type of research questions, the researcher's control over events and the focus of the investigation. In the same way Eisenhardt (1989) stresses that the definition of the research questions is essential to the development of the theory. Investigation should start from a well-defined research objective, which will guide the data collection and analysis (Mintzberg, 1979). However, the initial identification of research questions and possible constructs, although useful, should be regarded as provisional and may be altered during the investigation, since "no construct is guaranteed a place in the resultant theory, no matter how well it is measured" (Eisenhardt, 1989, p. 536). Additionally, the objectives and research questions are also essential to define the type of data to be collected.

The goal in this doctoral thesis is to move beyond domain-specific findings and individual brand constructs, i.e., to move beyond the analysis of case studies that only addresses one brand and a partial representation of the CBE nomological network. In this sense, the purpose is to identify the key brand constructs related to the CBE process and integrate them into a comprehensive model. In the same way, the study intends to test and analyze the effect of some moderators on the final model.

In this sense and according to Creswell (2009), when a problem calls for identification of factors that influence an outcome and the understanding of the best predictors of that particular outcome; the best approach is a quantitative approach. Additionally, the author refers that a quantitative approach is also the best approach to use to test a theory. Therefore, and taking into consideration the aim of the thesis and the formulation of the research question (questions of the type “what”), the research will followed a mainly quantitative approach (Yin, 2009).

In this study, the researcher has little control over events and the focus of the investigation is a contemporary phenomenon with a multifaceted nature in a real context, instead of a historical phenomenon. Therefore, and as recommended by Brodie *et al.* (2011) and MSI (2016), the strategy of methodology integrates a sequential exploratory strategy. In this sense, an exhaustive analysis of the all CBE antecedents identified by the different authors was conducted, followed by a second phase of quantitative data collection and analysis that builds on the results of the first phase.

7.3 Research strategy

In addition to measuring the concepts and emerging propositions of the research process, the assessment of empirical research bases is essential to evaluate the contribution of any study (Eisenhardt, 1989; Strauss and Corbin, 1998). Thus, in this section is described the research strategy and the operational aspects of the methodology will be further described in Section 7.4.

According to Yin (2009), the definition of the unit of analysis is essential to the research and should result from the research questions. The first research question (“What are the main drivers of CBE?”) aims to understand the contribution of each of CBE antecedents in the engagement of the customer, in such way that it turns possible to detect what are the main emotional, cognitive and behavior constructs in the CBE process. The second research question (“What are the factors that directly and indirectly influence the CBE process?”) purposes to clarify the direct and indirect effects on the nomological network of CBE. Lastly, the third research question (“What moderating effects are expected to occur in the CBE process?”) aims to test moderating effects and the effects of the customer’s gender and type of brand perceived by the customer.

Giving so, to investigate the complex and emergent phenomenon of CBE in a social networking site, the study adopts a social media user-oriented approach. Marketing

researchers argue in their conceptualizations of CBE that engagement include a subject and an object (Gambetti and Graffigna, 2010; Hollebeek, 2011a, 2011b, van Doorn *et al.*, 2010). Moreover, they specify that engagement is also context-specific (Brodie *et al.*, 2011; Hollebeek, 2011a) and occurs in consumption-related contexts that extend beyond purchase (van Doorn *et al.*, 2010). Thus and given the research questions of this doctoral thesis, the unit of analysis is the relationship between the customer and the brand. The doctoral thesis addresses the customer as the focal “engagement subject” and the brand as the “engagement object”. The “engagement context” of this study is the social networking site Facebook. Social media allow the creation and exchange of user-generated content (Kaplan and Haenlein, 2010; Zaglia, 2013). Additionally, it is a rich context for engagement manifestations, because foster the creation of strong, interactive customer relationships (Gummerus *et al.*, 2012). In the same way, social networking sites are one of the most popular forms of social media (Kaplan and Haenlein, 2010). In particular, Facebook, since it is the preferred social networking site for customers to engage with brands (Tsai and Men, 2013). Such context seems to offer an excellent opportunity to accomplish the goals of this thesis, because of its interactive nature (Gummerus *et al.*, 2012; Kaplan and Haenlein, 2010) and capability to support the creation of multi-way relationships between and among customers and the brand (Ouwersloot and Odekerken-Schröder, 2008).

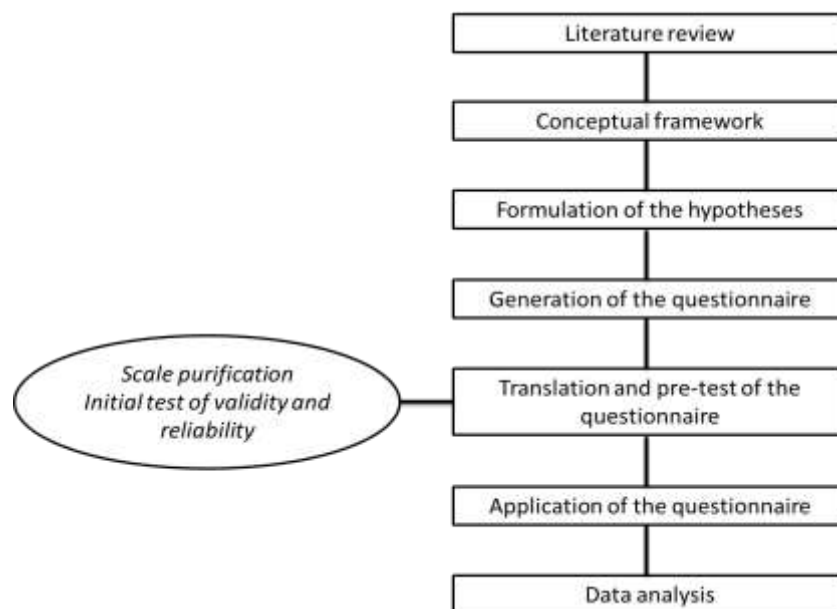
In order to test a theory is necessary to define the cases under study and their selection should not be made in a randomly way (Eisenhardt, 1989). According to Dubois and Gadde (2002), the investigator shall consider the importance and contribution of the case to the objectives set for the research. Moreover, Eisenhardt 1989) stresses that the selection of cases should enable a transparent analyses process. Based on these criteria, it was asked to the participants, in the survey, to select a brand that is engaging to them and to answer the questionnaire based on that particular brand. The case selection, by this method, has a dual purpose: ensure that the customer is engaged with the brand; and analyze similarities and develop common factors.

Additionally, a pilot questionnaire was conducted from 16th of November to 23th November, 2015. The pre-test to the questionnaire is important to establish the content validity of an instrument and to improve questions format and scales (Creswell, 2009).

Thus, 122⁴ customers answered to the pilot questionnaire and based on their comments and answers, modifications regarding content, wording, structure, and presentation were considered. The respondents' comments from the pilot test resulted in the reformulation of the first question and in some minimal modifications to the instrument in terms of phrasing of the items. Furthermore, some preliminary checks were conducted. A confirmatory factor analysis (CFA) was used to evaluate the psychometric properties of the study's constructs, identify the underlying factor structure and assess how well the measurement items load into their respective constructs. As a result two scales were abandoned: "customer participation" measure (that also violated the assumption of "all univariate distributions should be normal") and "customer affective commitment" measure.

When a measure instrument is modified or results from the combination of several instruments, the original validity and reliability may not hold for the new instrument (Creswell, 2009). Therefore, the validity and reliability were reestablished during the data analysis of the final questionnaire.

Figure 5 - Procedural steps of the doctoral thesis



⁴ 53% female, 75% with 18-30 years old and 50% with bachelor degree.

7.4 Operationalization of the methodology

In this section is presented and justified the choices made during the phase of implementation of the above methodology. Thus, this section begins by explaining the steps taken during the collection of the data (subsection 7.4.1) and final subsection describes the data analysis phase (subsection 7.4.2).

7.4.1 Data collection

In order to be able to examine cause-and-effect relationships, the most appropriated data collection instrument is the questionnaire, since this method enables to examine and explain relationships between constructs (Saunders *et al.*, 2007).

Research agrees that data collected via online tools had several advantages. Deutskens *et al.* (2006) argue that online questionnaires not only maximize response rates, but also yield comparable results to data collected through traditional surveys. In addition, this process of data collection allows gathering more data in a shorter period of time and at lower cost (van Selm and Jankowski, 2006). Therefore, the questionnaire was available online from 1st of December 2015 to 1st of March 2016 (Appendix A).

The questionnaire was designed with the objective of potentially minimizing response biases. In this sense, firstly, during questionnaire design each scale was systematically examined to reduce ambiguity and imprecision. Secondly, respondents were assured of anonymity and confidentiality of the study in the initial statement provided. Third, it was performed a CFA.

The structure questionnaire intended to provide data to test the hypotheses and consequently understand the relationships between constructs. The questionnaire was sent via email along with an introductory text and a link to a webpage with the online survey. As respondents were encouraged to resend the email, it is impossible to calculate an accurate response rate. To answer the questionnaire, customers were asked to name a brand with which they felt strongly engaged. They could refer to a service, a product or an organization, because the main aim was to ensure that the sample was composed by customers who had some degree (although variable) of CBE. The following questions are designed to measure emotional, cognitive and behavior intentions underlying the choice of the brand by the customer. More precisely, the questionnaire addresses the customer interest and personal relevance; the participation behavior; the perceived control, responsiveness and personalization of the interactivity

process; the sensation of escapism and intrinsic enjoyment; the WOM activity and praise; the customer satisfaction; reliability and trust intentions; and the affective and calculative commitment (Table 12). These are the independent variables, which are the variables “that (probably) cause, influence or affect outcomes” (Creswell, 2009, p. 50). In the case of this thesis, these are the variables that affect direct CBE. However, they can also be intervening or mediating variables, since this study also formulated hypothetical relationships between the independent variables. These are the variables that stand between the independent and dependent variables and mediate the effects of the independent variable on the dependent variable⁵.

Besides respondents’ characteristics, the questionnaire comprised 33 questions regarding CBE and its antecedents, using multiple indicators (Table 12). Each constructs is operationalized by two or more observed variables. The scales used in the empirical research derived from several existing scales in the literature (Table 12 and 13) and they were adapted to suit the context of this study. The constructs of this research were measured using multi-item 7-point Likert scale. The questions were formulated seeking clarity (in some cases was included help text) and avoiding redundancies.

Table 12 - Measurement items used to build the questionnaire

Constructs	Author(s)	Components	Measure (7-points scale)
Customer involvement	Mittal (1995, p. 670)	Interest	Importance (compared to others brands)
			Of interest (compared to others brands)
		Personal relevance	Means a lot to me
			Matters to me
Customer participation	Muntinga <i>et al.</i> (2011, p.16)	Types of behaviors (consuming, contributing and creating)	In the virtual social platform(s) of the brand, I ... A) view brand-related content and/or comments of others customers B) contribute with brand-related content C) produce and publish brand-related content
Customer interactivity	Wu (2006, p. 98)	Control	I was in control of my navigation through the Facebook page of the brand
		Responsiveness	I could communicate with the company directly for further questions about the brand if I wanted to
		Personalization	I perceived the brand’s Facebook page to be sensitive to my needs for information.

⁵ “those are variables that depend on the independent variables; they are the outcomes or results of the influence of the independent variables” (Creswell, 2009, p. 50).

Customer flow experience	Mathwick and Rigdon (2004, p. 330)	Escapism	Searching in the brand's Facebook page "gets me away from it all."
		Intrinsic enjoyment	I enjoyed the information search for its own sake, aside from any products or services I may eventually purchase
			I searched for the pure enjoyment of it
Customer word-of-mouth (WOM) referrals	Harrison-Walker (2001, p. 72)	WOM activity	I've told more people about this brand than I've told about most other brands
			When I tell others about this brand, I tend to talk about it in great detail
		WOM praise	I have only good things to say about this brand
			I am proud to tell others that I use this brand
Customer cumulative satisfaction	Olsen and Johnson (2003, p. 189)	Affective	How far from or close to do you think brand is to the ideal brand?
			How satisfied or dissatisfied are you overall with the brand?
Customer Trust	Delgado-Ballester <i>et al.</i> (2003, p. 41)	Reliability items description	This brand meets my expectations
			I feel confidence in this brand
			It is a brand that never disappoints me
		Intentions items description	This brand would be honest and sincere in addressing my concerns
			This brand would make any effort to satisfy me

Customer commitment	Harrison-Walker (2001, p. 72)	Affective commitment	I like this brand
			I have a special relationship with this brand
	Fullerton (2011, p. 97)	Calculative or continuance commitment	It would be very hard for me to switch away from this brand
			It would be too costly for me to switch from this brand to another
Customer Brand Engagement	Dwivedi (2015, p. 105)	Vigor	I am passionate about using this brand
			I can continue using this brand for very long periods
		Dedication	I feel enthusiastic when interacting with this brand
			I am proud of this brand
		Absorption	I get carried away when I interact with this brand
			I feel happy when I am interacting with this brand

Additionally, the questionnaire addresses the perceived brand reputation and customer's knowledge about the brand, as well as the trust towards the social networking site and customer's identification with the social networking site (Table 13). These are the moderating variables of the study, which allow investigating if they improve or reduce the causal effects of independent variables on CBE.

Finally, the questionnaire included three questions that allowed a sociodemographic characterization of the sample (gender, age and educational level) and another that allowed to understand how brand are perceived by customers (Table 13).

Table 13 - Moderators items presented in the empirical study

Moderators and its components			Measure (7-points scale)	Author(s)
Individual-level factors	Stable factors	Socio-economic status, personal values, preferences, age	Respondent's gender	van Doorn <i>et al.</i> (2010)
			Respondent's age	
			Respondent's educational level	
	Dynamic factors	Perceived characteristics of the brand	Why do you buy this brand? A) Utilitarian reasons B) Sign-value of the brand C) Emotional reasons	
		Perceived brand reputation	How do you classify the brand reputation?	
		Customer's brand knowledge about the brand	How do you classify your knowledge about the brand?	
Presence in the virtual social platforms of the brand	Trust towards the brand community		Do you trust in the virtual social network brand community?	Algesheimer <i>et al.</i> (2005) and Pentina <i>et al.</i> (2013)
	Customer's identification with the brand community		Do you identify yourself with the virtual social network brand community?	

Access to sampling frames (e.g. mail list) of potential respondents on the population allowed creating a random sample. In this way, each individual in the population has an equal probability of being selected (Creswell, 2009). With randomization, a representative sample from a population provides the ability to generalize to a population. Additionally, a random selection ensures the independence of observations, i.e. observations of different subjects are independent of each other.

According to Hair *et al.* (2010), one questionnaire should have between 5 to 10 answers per question. In the same way, Bryant and Yarnold (1995) state that, “one’s sample should be at least five times the number of variables (...) [and] every analysis should be based on a minimum of 100 observations regardless of the subjects-to-variables ratio” (p. 100). In this sense, the questionnaire of this doctoral thesis should have at least 170 to 340 answers. In order to ensure sufficient variability to estimate the parameters of the model, Marôco (2014) argues that a sample should have between 10 and 15 observations for each observed variable⁶ or 5 observations per parameter to be

⁶ Variables that are measured, manipulated or observed directly (Marôco, 2014, p. 9).

estimated. According to this author, the sample size of this doctoral thesis should be between 340 and 510. Westland (2010) proposed a simple formula to estimate the sample size (n) based on the number of observed variables (p) and latent variables (f) of the model: $n \geq 50r^2 - 450r + 1100$, where $r = p/f$. In the case of this doctoral thesis, there are 34 observed variables and 9 latent variables. As a result the sample size should be greater than or equal to 114 observations.

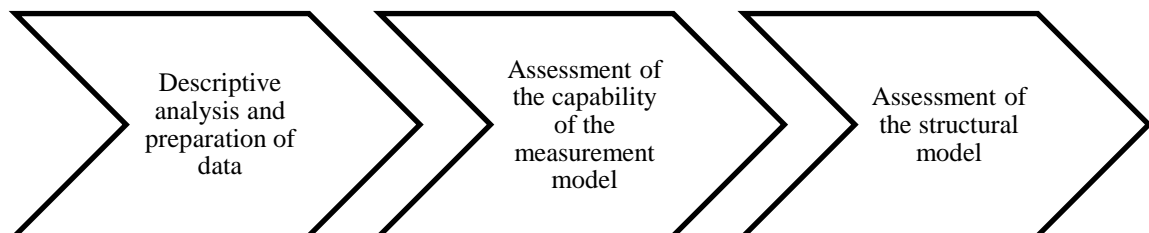
Giving the sample size of this doctoral thesis ($n = 866$), the sample is according with the suggestions of all authors.

7.4.2 Data analysis

After data collection, the following step is data analysis (Creswell, 2009). As the goal is to test the validity of a theoretical model that defines casual or hypothetical relationships between variables, structural equation modeling (SEM) is the multivariate technique choose to analyze the data collected.

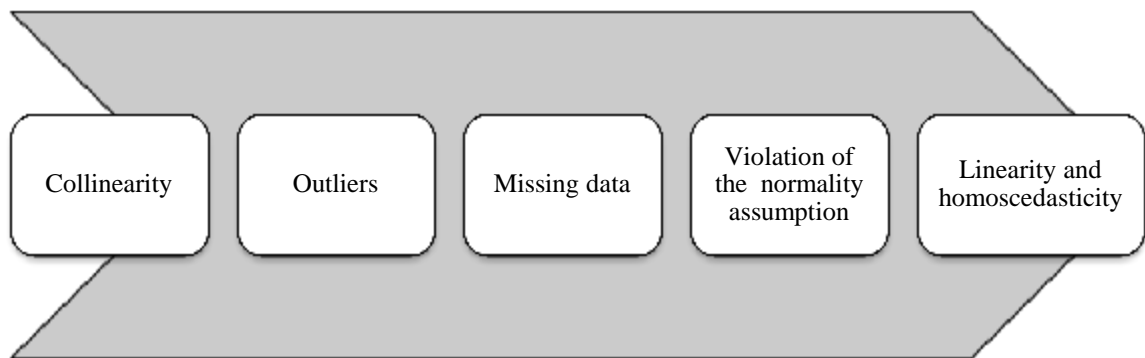
SEM is a tool for analyzing multivariate data that has been long known in marketing to be especially appropriate for theory testing (Baumgartner and Homburg, 1996; Steenkamp and Baumgartner, 2000). SEM provides a broad and integrative approach in dealing with multiple relationships while accounting for statistical efficiency (Kline, 2011). Also, provides a more holistic and straightforward tests of mediation (Hair *et al.*, 2010). This methodology allows studying complex multivariate phenomena whereby measurement errors both in the dependent and explanatory variables are accounted for (Raykov and Penev, 2002). In this sense, data analysis consisted of three phases: (i) descriptive analysis and preparation of data; (ii) assessment of the capability of the measurement model; and (iii) assessment of the structural model (Figure 6).

Figure 6 – Three phases of data analysis



In the first phase, it was conducted a descriptive analysis for all variables under study. This analysis involves describing the distribution (means and frequency tables), dispersion (standard deviation, and skewness and kurtosis indices) and inter-correlation for these variables. Likewise, in this phase, it was assure the validation of the SEM assumptions. SEM assumes independence of observations, non-null sample covariance⁷ and linearity⁸. Also, SEM has as assumptions: multivariate normal distribution, the absence of multicollinearity and no existence of outliers in the database. Therefore, the original data file was screened for the following problems:

Figure 7 – Problems screened during data preparation



Collinearity can occur when what appear to be separate variables actually measure the same thing (Kline, 2011). The method used to detect collinearity was variance inflation factor (VIF), which is available on SPSS. In general, VIF values above 5 indicate possible problems with the presence of multicollinearity. On the other hand, when VIF value is greater than 10 the variable in question may be redundant (Marôco, 2011). In the presence of extreme collinearity, there are two basic ways to deal with it: eliminate the variable in question or combine redundant ones into a composite (Kline, 2011).

⁷ Observed variables are operationalized by a set of observed variables that have some sort of association between with each other.

⁸ Relationship between observed variables and latent variables are linear.

Additionally, data base was clean from outliers, i.e. “scores that are different from the rest” (Kline, 2011, p. 54). Data can have a univariate outlier if it is extreme⁹ on a single variable or can have a multivariate outlier if it is extreme on two or more variables. The analysis of outliers can be made using two types of measures: boxplots and Mahalanobis distance (Marôco, 2014). In this research, the analysis of outliers was made using the Mahalanobis distance (D). According to Marôco (2014), a case is a multivariate outlier if the probability associated with its D^2 (squared Mahalanobis distance¹⁰) is 0.001 or less.

Regarding missing data, the questionnaire was built in order to avoid this problem. In this sense all questions were of mandatory answer. Consequently, there are no missing values in the data set.

Estimation in SEM with Maximum Likelihood (the method used in this thesis) requires the validation of the multivariate normal distribution assumption. This means that all individual univariate distribution has to be normal; the joint distribution of any pair of the variables has to be bivariate normal; all bivariate scatterplots have to be linear; and the distribution of the residuals has to be homoscedastic (Kline, 2011). Skew and kurtosis are two ways to inspect univariate normality. If all observed variables present skew and kurtosis indexes close to zero, is possible to assume that the multivariate normal distribution assumption is plausible (Kline, 2011; Marôco, 2014). However, there is no consensus regarding the critical values that indicate a deviation from normal distribution that could affect the reliability of conclusions in relation to model quality and estimation of parameters. According to Marôco (2014), the majority of the studies established that values for skew index between -3 and 3 and values for kurtosis index between -10 and 10 are considered acceptable in order to prove normal univariate distribution. Linear relations and homoscedasticity (uniform distribution) among residuals are aspects of multivariate normality and are easy to detect by looking at scatterplots.

⁹ According to Kline (2011), there is no single definition of “extreme”, yet a common rule is to considered scores with more than three standard deviations beyond the mean as an outlier.

¹⁰ D^2 follows a chi-square distribution with degrees of freedom equal to the number of variables included in the calculation.

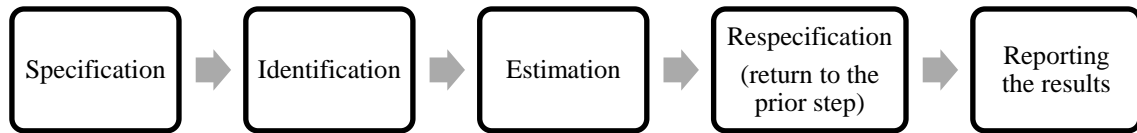
In the second phase, a confirmatory factor analysis (CFA) was conducted to assess the capability of the measurement model (MacCallum and Austin, 2000). There are two approaches to testing the validity of the model: the two-step modeling of Anderson and Gerbing (1988) or the four-step modeling of Mulaik and Millsap (2000).

The two-step approach emphasized the analysis of two conceptually distinct models: a measurement model followed by the structural model. Therefore, the first step implies the respecification of the model as a CFA measurement model, i.e. specify the relationships among measured (observed) variables underlying the latent variables. The CFA is then analyzed in order to determine whether it fits the data. Given the acceptance of the measurement model, the second phase is the structural model, i.e. specification the relationships among latent variables as posited by theory. The measurement model provides an assessment of convergent and discriminant validity, while the structural model provides an assessment of nomological validity.

The four-step modeling is an extension of the two-step modeling. The first step is an exploratory factor analysis (EFA) that allows each indicator to load on every factor (the number of factors remains the same of the original model). This allowed testing the provisional correctness regarding the number of factors. The second and third steps correspond to the first and second steps of the two-step modeling. And, the last step involves tests of priori hypotheses about parameters free from the outset of model testing. There is no best method. Both methods have their advantages and disadvantages. However the four-step modelling requires four or more indicators per factor (Kline, 2011), which is not the case of the model under study in this thesis.

In the third phase, the structural model was assessed. The analysis comprises six steps that are in fact iterative, because problems at a later step can require a return to an earlier step (Kline, 2011). The steps of SEM are the following (Kline, 2011; MacCallum and Austin, 2000; Marôco, 2014; McDonald and Ho, 2002):

Figure 8 – Steps of structural equation modeling (SEM)



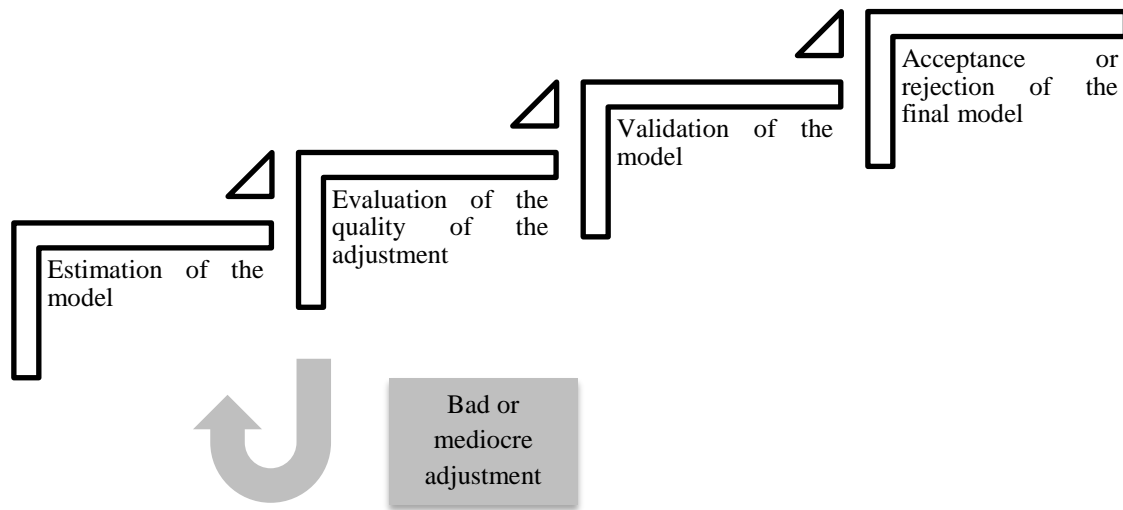
Source: Adapted from Kline (2011, p. 92)

The first step is the specification of the model and consists in the representation of the hypotheses in the form of a structural equation model. This representation corresponds to presumed relations among observed or latent variables. In the case of this study, the hypotheses described the relations between latent variables. The specification of the model was made in Section 5 of the Chapter I.

The second step is the identification of the model. According to Kline (2011), the model is identified “if it is theoretically possible for the computer to derive a unique estimate of every model parameter” (p. 93). The model presented in this thesis is recursive structural model. Giving the particular characteristics of this type of model (disturbances are uncorrelated and all casual effects are unidirectional), recursive path models are always identified.

The third step is the estimation of the model and involves using an SEM computer tool. In the case of this thesis, the software was SPSS AMOS (version 22) and the method was Maximum Likelihood (ML). The ML estimators are consistent and exhibit asymptotic normality. In other words, as the sample size increases to infinity, the ML estimators converge to the true value of the population parameter, with minimal variance and normal distribution. However, these properties are valid only when the observed variables have a multivariate normal distribution or when the covariance matrix presents Wishart distribution (Marôco, 2014). Until the acceptance of the model, the following steps were carried out:

Figure 9 – Estimation and respecification: different stages of analysis



Source: Adapted from Marôco (2014, p. 27)

After the first estimation of the model is necessary to evaluate the model fit, which implies to determine how well the theoretical model is able to reproduce the correlation structure of the observed variables under study (Kline, 2011). There is no consensus among authors about different strategies and recommendations for the analysis of the quality of adjustment. Nonetheless, there are several stats that can be used to assess the quality of the adjustment: (i) adjustment tests (e.g. chi-square test); (ii) empirical indices that are based on the likelihood function or on the matrix of residuals produced during the model fit; (iii) and analysis of residuals and the significance of the parameters (Marôco, 2014). The overall evaluation of the model fit was made according to the recommend values of absolute, relative and parsimony fit indices and measures of population discrepancy (MacCallum and Austin, 2000; Marôco, 2014; McDonald and Ho, 2002).

Table 14 – Model fit: absolute, relative and parsimony fit indices, and measures of population discrepancy

Indices		Reference values	Macros in SPSS AMOS
Absolute fit indices	χ^2/df	> 5 - Unacceptable adjustment	CMIN/DF
]2; 5] - Bad adjusted	
]1; 2] - Good adjustment	
		~ 1 - Very good adjustment	
	Root Mean Square Residual (RMSR)	< 0.08 - Good adjustment	RMR
		0 - Perfect adjustment	
Relative fit indices	Goodness of Fit Index (GFI)	< 0.8 - Unacceptable adjustment	GFI
		[0.8; 0.9[- Bad adjusted	
		[0.9; 0.95[- God adjusted	
		≥ 0.95 - Very good adjustment	
	Normed Fit Index (NFI) ¹¹	< 0.8 - Unacceptable adjustment	NFI
		[0.8; 0.9[- Bad adjusted	
		[0.9; 1[- God adjusted	
		1 - Perfect adjustment	
	Comparative Fit Index (CFI)	< 0.8 - Unacceptable adjustment	CFI
		[0.8; 0.9[- Bad adjusted	
		[0.9; 0.95[- God adjusted	
		≥ 0.95 - Very good adjustment	
	Relative Fit Index (RFI) ¹¹	< 0.9 - Bad adjustment	RFI
		~ 1 - Good adjustment	
Parsimony fit indices	Tucker-Lewis Index (TLI)	< 0.8 - Unacceptable adjustment	TLI
		[0.8; 0.9[- Bad adjusted	
		[0.9; 0.95[- God adjusted	
	Parsimony GFI Parsimony CFI	< 0.6 - Bad adjustment	PGFI PCFI
		[0.6; 0.8[- Good adjustment	
		≥ 0.8 - Very good adjustment	
Measures of Population Discrepancy	Root Mean Square Error of Approximation (RMSEA)	> 0.10 - Unacceptable adjustment	RMSEA
]0.05; 0.10] - Good adjustment	RMSEALO90
		≤ 0.05 - Very good adjustment	RMSEAH90

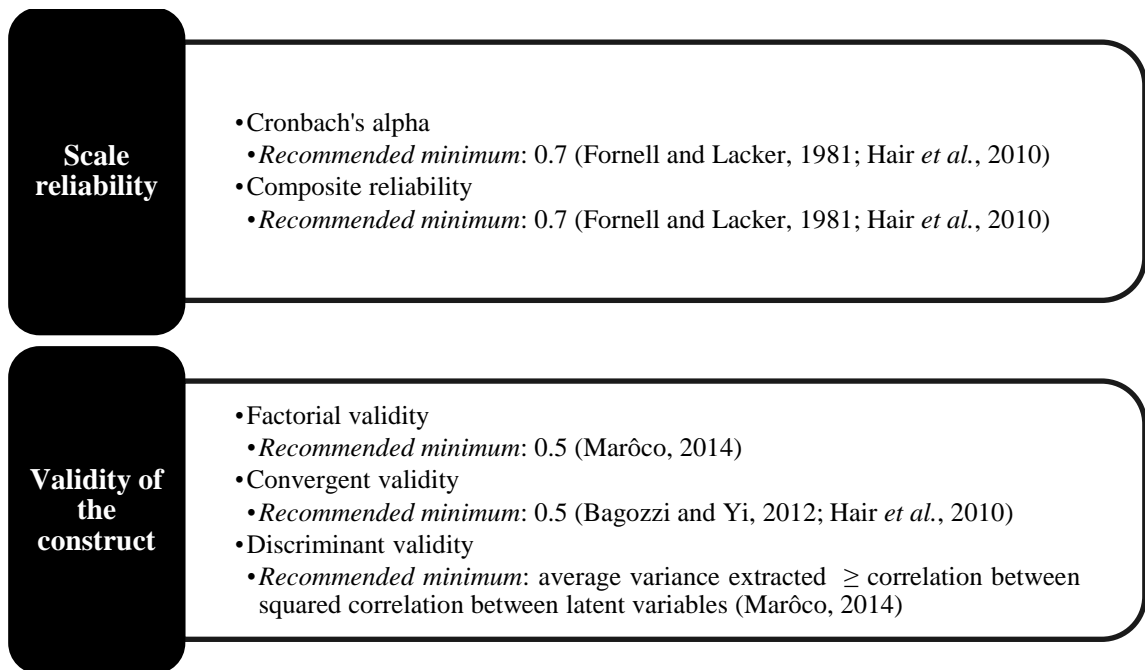
Source: Adapted from Marôco (2014, p. 55)

Through the analysis of residuals is possible to complement the evaluation of the quality of the adjustment. The evaluation of the standardized residuals can help to identify potential outliers. The presence of outliers is indicative of local fit problems. On other hand, the evaluation of asymptotic standard errors of the model parameters and their

¹¹ This index is influenced by the number of parameters to be estimated in the model and the sample size (it increases with the number of parameters and sample size). Additionally, shows an erratic behavior for small samples. For this reasons, this index is rarely used (Marôco, 2014).

significance allows to identify problems with the estimation of that particular parameter (e.g. multicollinearity, outliers, subsampling), since no significant parameters suggest the existence of model specifications problems. Scale reliability is assessed through the examination of Cronbach's alpha (Eisinga *et al.*, 2012) and composite reliability (Figure 10). To indicate reliability, latent variables must have coefficients greater than the proposed level of 0.70 (Fornell and Lacker, 1981; Hair *et al.*, 2010). Finally, assessing the reliability of individual observed variables is particular suitable to evaluate the relevance of the observed variables in the model (Figure 10). Factorial, convergent and discriminant validity are assessed through the examination of standardized factor loadings, average variance extracted (AVE) and Spearman's correlation. Factorial validity is usually assessed by the standardized factor loadings. Standardized factor loadings greater than or equal to 0.5 indicate that items are a reflection of the latent variable, i.e. the construct has factorial validity. Generally, in the presence of squared standardized factor loading greater than or equal to 0.25, it is considered that the item displays an appropriate individual reliability (Marôco, 2014). Convergent validity is demonstrated when the observed variables that compose the latent variable are positive and highly correlated, i.e., the behavior of these items is primarily explained by the construct. Fornell and Lacker (1981) proposed to evaluate the convergent validity by AVE. An AVE greater than or equal to 0.5 is indicator of convergent validity (Bagozzi and Yi, 2012; Hair *et al.*, 2010). Discriminant validity assesses whether the items that reflect a latent variable are not correlated with other(s) latent variable(s) (Fornell and Lacker, 1981). According to Marôco, (2014), there are at least three forms of demonstrating discriminant validity, yet, from a psychometric perspective, the most recommended to evaluate the discriminate validity is: AVE of the latent variables should be higher or equal to the squared correlation between these latent variables. These three components together (factorial, convergent and discriminant validity) allow demonstrate the validity of the construct (Kline, 2011; Marôco, 2014).

Figure 10 – Scale reliability and validity of constructs



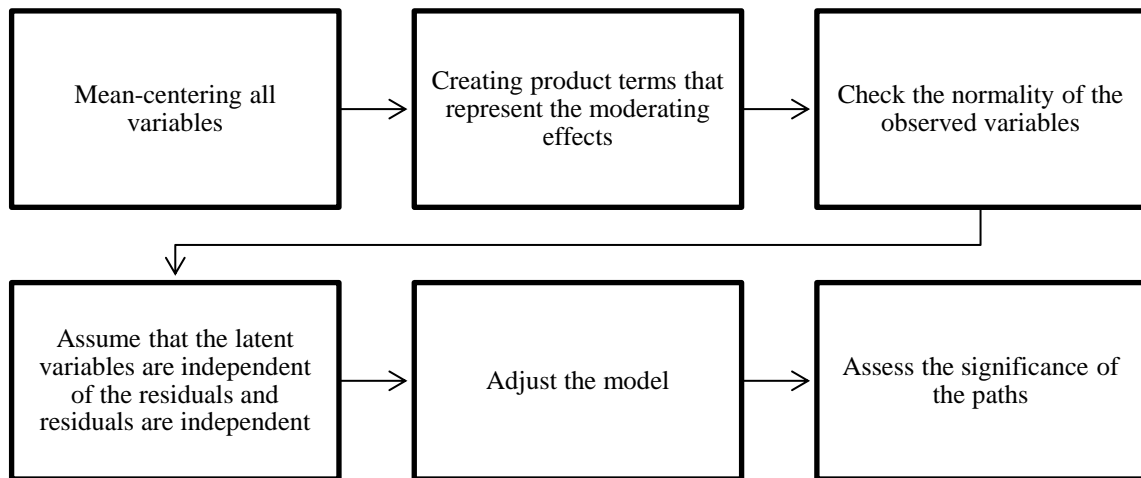
Source: Bagozzi and Yi, 2012; Fornell and Lacker, 1981; Hair *et al.*, 2010; Kline, 2011; and Marôco, 2014

In the case of a bad or mediocre adjustment, the model is not appropriate. However, this does not mean that the model is wrong, only means that the model needs to be adjusted in order to have a better adjustment. Model's respecification should be guided more by rational considerations than purely statistical ones (Kline, 2011). Yet, based on the modification indices (MI) calculated by the method of Lagrange multipliers, it is possible to significantly improve the quality of the adjustment (Marôco, 2014). The adjustment of the model was made based on the modification indices produced by AMOS and on theoretical considerations. After assessed the theoretical plausibility of the changes, the measurement errors that led to considerable improvement in the model fit were correlated.

After establishing a satisfactory model fit, the next steps were re-estimation of the model, interpretation and report of the results. The significance of the structural coefficients is performed with a Z-test produced by AMOS software (critical ratios and p-values). The estimates are shown in a standardized form and estimates of parameters with p-value ≤ 0.05 were considered statistically significant. The significance of the indirect effects was tested with a bootstrap method (2000 samples).

Once tested the proposed theoretical model, it was incorporated into the established model some moderating effects. The aim is to investigate if the integration of these variables moderates the final impact, that is, either improves or reduces the causal effects of the drivers on CBE. With the inclusion of moderators, the analysis become more complex, namely in what concerns the validation of the model assumptions (e.g. the multivariate normal distribution assumption, the absence of multicollinearity). Therefore, the analysis of the moderating effects requires strategies to deal with the problems associated with the complexity of the model. This involves creating product terms that represent interaction effects. A product term is “the product of the scores from two different variables, such as $XW = X \times W$ ” (Kline, 2011, p. 327). According to Marôco (2014), the moderate latent variable can be obtained in different ways: (i) crossing all items of two factors; (ii) crossing the items of each factor in pairs; (iii) crossing the items with higher factor loadings in each factor; or (iv) crossing at least three for the factor of moderation. Among the possible strategies, simulation studies revealed that crossing the items of each factor in pairs is the strategy with better performance. After obtaining the moderating variable, it was necessary to: (i) check the normality of the observed variables; (ii) assume that the latent variables are independent of the residuals and residuals are independent; (iii) adjust the model; (iv) set the parameters of the interaction terms; and (v) adjust the model of moderation and assess the significance of the paths. Additionally, in order to prevent extreme collinearity that can occur when analyzing product terms, original variables were mean-centering before calculating product terms. Mean-centering occurs when the average of a variable is adjusted to zero (the mean is subtracted from every score) and centering tends to reduce correlations between product terms and constituent variables.

Figure 11 - Moderating effects: different stages of analysis



Lastly, a multi-group analysis is performed, in order to assess whether the SEM is equivalent (invariant) in different groups. The aim of this analysis is to identify items that have different meanings for different groups and different relationships among observed variables and latent variables. This type of analysis requires the existence of mutually exclusive groups (Marôco, 2014). Consequently it was defined two groups based on the gender of the customer (female versus male) and the type of brands (brands perceived as high functionality and representativeness versus brands perceived as low functionality and representativeness). The first group was formed based on the question “gender” that was categorized with one for female and two for male. In strictest sense, the structural model would be fully constrained, so all parts of model have to be exactly equal in all groups. Giving that, the analysis starts from the least constrained to fully constrained. In this sense, the analysis begins with the adjustment of the individual model to each one of the groups, eliminating the items that do not contribute to the quality of the model. This model that has the same factorial structure in all groups (configural invariance) serves as baseline model to the analysis of the invariance. Therefore, the general procedure is to test (metric and structure) invariance between the unconstrained model (baseline model) for all groups and the model with constrained parameters (parameters are constrained to be equal between the groups). If the chi-square difference statistic is not significant between the unconstrained and the constrained model, then the model has (metric or structure) invariance across groups. The selection of parameters to constrain depends on the type of invariance that is being assessed. Metric invariance implies that the factor loadings (in AMOS, “measurement

weights”) are identical across the groups. In other words, it is tested if the strengths of the relations between specific scale items and their respective underlying construct are the same across groups. If lack of metric invariance is found, the meaning of the latent construct is shifting across groups, indicating group differences in the underlying latent structure. The second step is to constrain regression weights to be equal across groups (in AMOS, “structural weights”). The third, fourth and fifth restrictions are: covariances between latent variables (in AMOS, “structural covariances”), residuals of the latent variables (in AMOS, “structural residuals”) and residuals (in AMOS, “measurement residuals”).

Table 15 – Multi-group analysis: models to assess invariance

Constrained parameters	Measurement weight	Structural weight	Structural covariances	Structural residuals	Measurement residuals
Factor loadings	X	X	X	X	X
Residual weights		X	X	X	X
Factor's covariances			X	X	X
Factor's residuals				X	X
Residuals					X

The second group results of a multivariate exploratory analysis made base on data obtained with the question “Why do you buy this brand?”. In order to describe, organize and classify the brands, a principal component analysis (PCA), a factor analysis (FA) and a subsequent cluster analysis was performed. In PCA, the criteria for retaining components were: Kaiser’s criterion (retain only factors with eigenvalues greater than 1) and Pearson’s criterion (retain a number of components that explain at least 80% of the total variance). The evaluation of the correlation matrix was performed through the KMO and Bartlett’s test. The rotation method was Varimax, obtaining in this way a solution where each variable has a strong communality with only one factor and approximately null with the others factors (Marôco, 2011). After performing PCA and FA, a cluster analysis was performed. Firstly, a hierarchical classification analysis that grouped the elements based on the Ward’s method and using the square Euclidean distance as dissimilarity measure between brands. Then, a non-hierarchical classification analysis (K-means) allowed refine the classification obtained in the

hierarchical classification. Finally, a multi-group analysis was performed following the methodology already explained (Table 15).

7.5 Conclusion

Given the nature of the problem, the investigation was conducted using a mainly quantitative methodology.

This study addresses the customer as the focal “engagement subject”, the brand as the “engagement object”, the social networking site Facebook as the “engagement context” and operationalizes the CBE as defined by Dwivedi (2015). Therefore, the unit of analysis is the relationship between the customer and the brand. The drivers of CBE considered in the analysis were: customer involvement (customer interest and personal relevance), customer participation (online behaviours of the customer), customer interactivity (customer perceived control, responsiveness and personalization), customer flow experience (customer sensation of escapism and intrinsic enjoyment), customer cumulative satisfaction, customer WOM activity and praise, customer trust (customer reliability and trust intentions) and customer commitment (affective and calculative). The moderates included in the model were: customer’s perceived brand reputation; customer’s knowledge about the brand, customer’s trust and customer’s identification with the virtual social network brand community. Moreover, it was analyzed the invariance of the model, when considering different customer’s genders and type of brands.

The data collection instrument is a structure questionnaire, the constructs of the study were measured using multi-item seven-point Likert scale and the analysis of the questionnaire was performed using the IBM SPSS and SPSS AMOS, version 22. Structural equation modelling was the multivariate technique chosen to analyse the data collected. Data analysis was performed in three steps: (i) descriptive analysis and preparation of data; (ii) assessment of the capability of the measurement model; and (iii) assessment of the structural model. The last step comprises the analysis of the direct, indirect and moderating effects established in the theoretical model.

In the next section (Section 8), the data analysis and results are presented.

8. Data Analysis and Results

8.1 Introduction

The quantitative study aimed to identify the drivers of CBE in the context of a social networking site (Facebook). For this purpose, it was used a structure questionnaire that aimed to empirically test and develop the relations suggested by the theoretical framework. Confirmatory Factor Analysis (CFA) and Structural Equation Models (SEM) were used to test the proposed theoretical framework. The SPSS AMOS (version 22) program was employed for this purpose.

This section presents the results associated with (i) the analysis of the direct and indirect effects on CBE; (ii) the analysis of the moderating effects; and (iii) the analysis of the variance or invariance of the model, when comparing different customers (regarding their gender) and the type of brand perceived by the customer. Therefore, Section 8.2 consists in the validation of the assumptions of the SEM and characterization of the sample. Section 8.3 presents the results of CFA that was conducted to assess the capability of the measurement model. Lastly, in the Section 8.4, the hypotheses are tested and the section 8.5 sums up the results.

8.2 Preliminary analyses

The 866 questionnaires were first cleaned. According with the criterion of squared Mahalanobis distance (Marôco, 2014), there were 67 scripts identified as outliers. Therefore, they were removed from the sample (Appendix C). Thus, a total of 799 scripts were available for further analysis.

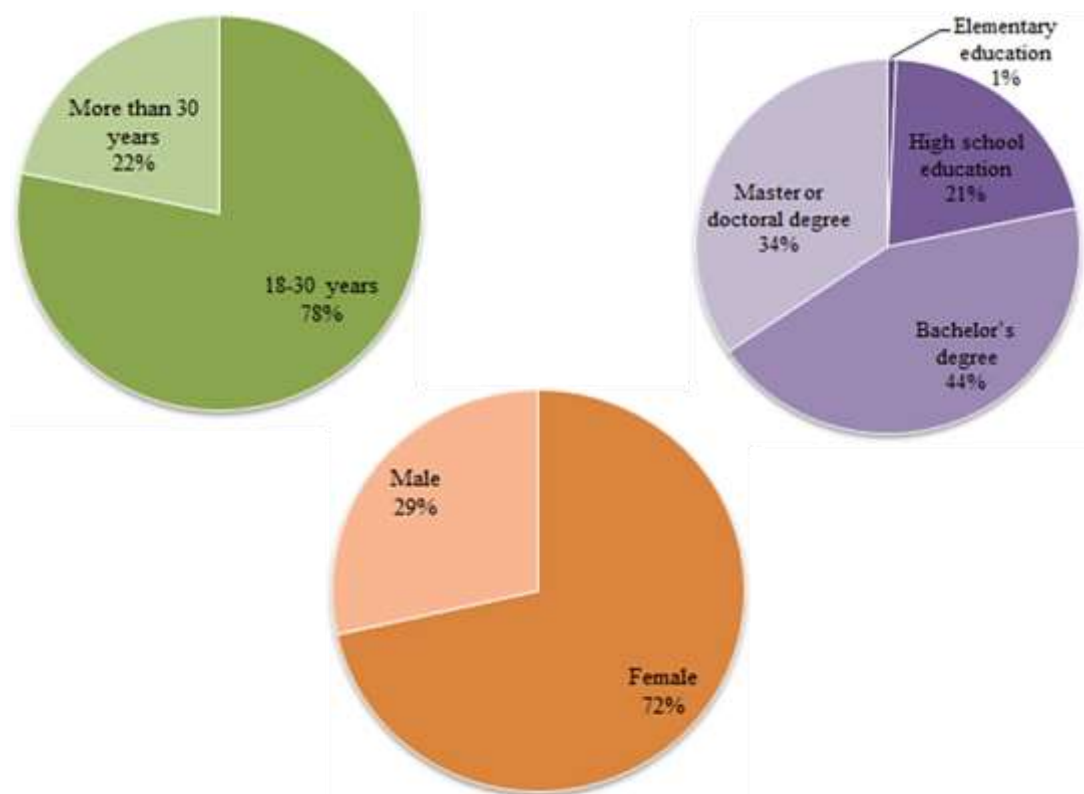
Descriptive statistics and validation of SEM assumptions are shown in Appendix B and Appendix C. Table 16 summarizes the main descriptive statistics and show the score reliability, composite reliability and average variance extracted for each construct as well as the standardized factor loadings. The constructs (used as drivers in the model) ranges from 1 to 7, corresponding averages and standard deviations ranges from 1.22 to 6.06 and from 0.42 to 2, respectively (Appendix B and Table 16). A check of the values for skewness indicated that all values ranged from -1.32 to 2.85. Kurtosis values were within -1.23 to 8.09 (Table 16). So is possible to assume that the multivariate normal distribution assumption is plausible (Marôco, 2014). The majority of VIF values are less than 5 (Appendix C). The exceptions are “Reability1” with a VIF of 5.07,

“PersonalRelevance1” with 5.14 and “Reability2” with 5.47, indicating possible problems with the presence of multicollinearity (Kline, 2011; Marôco, 2011).

The sample comprises 78.3% customers with age between 18 and 30 years, 71.5% female customers and 43.8% customers with bachelor’s degree (Figure 12). Previous studies indicated that women spend more time on Facebook than men (e.g. Hoy and Milne, 2010; McAndrew and Jeong, 2012; Shepherd, 2016) and statistics shows that women between the ages of 18 and 29 years are the most active Facebook users (Pew Research Center, 2016). In this sense, the sample is in agreement with the population of interest.

In total, 283 different brands were represented. Among the brands selected by the customers, the most referred (more than 10 times) were Zara (8.83%), Nike (8.08%), Apple¹² (4.98%), Adidas (3.11%), Mango (2.74%), Coca-Cola (2.11%), Springfield (1.37%), Nivea (1.24%), Pandora (1.24%) and Salsa (1.24%).

Figure 12 – Characterization of the sample



¹² App Store and iTunes.

8.3 Measurement model analysis

The original model adjusted to a sample of 799 customers revealed to have a bad adjustment (GFI = 0.789; CFI = 0.849; PGFI = 0.611; PCFI = 0.745).

Confirmatory factor analysis (CFA) and reliability tests were performed on the items used to measure CBE and its antecedents in order to evaluate the psychometric properties of the study's constructs. As a result, three items were removed "Consuming" (from the "Customer Participation" construct), "Vigor2" (from the "CBE" construct) and "Affective1" (from the "Customer Commitment" construct)¹³.

Internal reliability tests of the identified factors showed strong Cronbach's alpha, ranging from 0.719 to 0.912 (Eisinga *et al.*, 2012). Composite Reliability (CR) and Average Variances Extracted (AVE), with all CR and AVE estimates above recommended minimums of 0.70 and 0.50, respectively (Bagozzi and Yi, 2012; Fornell and Lacker, 1981; Hair *et al.*, 2010). In addition, evidence of the measures' validity is provided by the fact that all factor loadings are significant and above 0.5, suggesting high levels of internal consistency and adequate item reliability (Marôco, 2014). Moreover, convergent and discriminant validity of latent variables was assessed by the Spearman's correlation and the comparison of AVE with the squared-correlation between latent variables (Appendix D and Table 16). All latent variables show convergent and discriminant validity, demonstrating the validity of the constructs (Bagozzi and Yi, 2012; Fornell and Lacker, 1981; Hair *et al.*, 2010; Marôco, 2014).

After adjustments, according to accepted standards (MacCallum and Austin, 2000; Marôco, 2014; McDonald and Ho, 2002), the model suggests an adequate model fit: $X^2/df = 3.442$; GFI = 0.911; CFI = 0.957; TLI = 0.944; PGFI = 0.651; PCFI = 0.730; RMSEA = 0.055; $P[rmsea \leq 0.05] < 0.06$ (Appendix E). In addition, the simplified model had a better adjustment quality than the original model ($\Delta X^2 > X^2_{0.95(150)} = 1991.575 > 179.581$), as well as a considerably lower Modified Expected Cross-Validation Index ($MECVI_{OM} = 4.237$ versus $MECVI_{AM} 1.779$).

¹³ Subsequent analyses of their standardized factor loadings indicate that they were significantly lower when compared with other items in the same factor. In addition, modification indices suggested the saturation of these variables on factors different from those suggested by the original model.

Table 16 – Score reliability, composite reliability (CR), average variance extracted (AVE), standardized factor loadings and descriptive statistics

Variable	Cronbach's alpha (score reliability)	CR	AVE	Item	Standardized factor loadings	Mean	Standard deviation	Skewness	Kurtosis
Customer Brand Engagement (CBE)	0.889	0.892	0.626	Vigor1	0.677	5,15	1,54	-0,75	0,15
				Dedication1	0.864	4,38	1,75	-0,25	-0,81
				Dedication2	0.738	5,06	1,65	-0,57	-0,53
				Absorption1	0.772	3,36	1,83	0,30	-0,90
				Absorption2	0.885	3,73	1,81	0,08	-0,95
Customer involvement (CI)	0.910	0.913	0.724	Interest1	0.893	4,90	1,52	-0,46	-0,42
				Interest2	0.772	5,03	1,46	-0,51	-0,34
				PersonalRelevance1	0.914	4,33	1,75	-0,15	-0,87
				PersonalRelevance2	0.817	3,87	1,87	0,03	-1,06
Customer participation (CP)	0.863	0.866	0.763	Contributing	0.885	1,49	1,11	2,52	6,11
				Creating	0.862	1,42	1,01	2,85	8,09
Customer interactivity (CInt)	0.782	0.788	0.556	Control	0.663	3,90	1,79	-0,12	-0,91
				Responsiveness	0.724	4,32	1,78	-0,16	-0,86
				Personalization	0.840	4,27	1,66	-0,28	-0,68
Customer flow experience (CFE)	0.719	0.753	0.506	Escapism	0.660	2,58	1,67	0,90	-0,10
				IntrinsicEnjoyment1	0.784	4,54	1,91	-0,43	-0,91
				IntrinsicEnjoyment2	0.683	3,77	1,86	0,07	-1,07
Customer word-of-mouth (WOM) referrals (Cwom)	0.856	0.859	0.604	Activity1	0.790	4,80	1,61	-0,41	-0,61
				Activity2	0.832	4,10	1,75	-0,03	-0,92
				Praise1	0.678	4,66	1,53	-0,36	-0,50
				Praise2	0.801	4,55	1,83	-0,36	-0,88
Customer cumulative satisfaction (CCS)	0.898	0.898	0.815	Satisfaction1	0.883	5,60	1,15	-0,66	0,13
				Satisfaction2	0.922	5,81	1,09	-0,93	0,81

Customer trust (CT)	0.912	0.912	0.679	Reliability1	0.899	5,67	1,18	-0,93	0,87
				Reliability2	0.919	5,74	1,15	-0,95	0,74
				Reliability3	0.815	5,01	1,44	-0,51	-0,31
				Intentions1	0.814	5,21	1,32	-0,58	-0,11
				Intentions2	0.644	4,45	1,61	-0,33	-0,61
Customer commitment (CC)	0.883	0.892	0.735	Affective2	0.787	4,81	1,63	-0,47	-0,48
				Calculative1	0.904	4,19	1,94	-0,13	-1,14
				Calculative2	0.876	4,05	1,99	-0,05	-1,22
Individual-level factors	-	-	-	Gender	-	1,22	0,42	0,95	-1,10
	-	-	-	Age	-	1,29	0,45	1,42	0,19
	-	-	-	EducationalLevel	-	3,12	0,75	-0,29	-0,92
	-	-	-	BrandReputation	-	6,06	0,92	-0,82	0,25
	-	-	-	BrandKnowledge	-	5,34	1,08	-0,41	0,08
Presence in the virtual social platforms of the brand	-	-	-	ComTrust	-	5,12	1,36	-,829	,757
	-	-	-	ComIden	-	4,89	1,48	-,637	,206
Reason to buy	-	-	-	Utilitarian	-	4,37	2,00	-0,30	-1,15
	-	-	-	Symbolic	-	3,37	1,99	0,26	-1,23
	-	-	-	Emotional	-	4,68	1,97	-0,50	-0,97

Note: All significant at $p < 0.05$

8.4 Causal model analysis: hypotheses testing

8.4.1 Analysis of the CBE antecedents

The causal model elicits a significant Chi-square (i.e. χ^2 (373) = 1388.903, $p < 0.05$). Other fit indices suggest an acceptable fit to data: $X^2/df = 3.724$; GFI = 0.90; CFI = 0.948; TLI = 0.935; PGFI = 0.677; PCFI = 0.760; RMSEA = 0.058; $P[rmsea \leq 0.05] < 0.109$ (Appendix F). The model explains 76% of the variability of CBE levels observed in the analyzed sample ($R^2 = 0.76$).

Table 17 provides an overview of the hypothesis testing results. Specifically, customer flow experience has the greatest impact on CBE. Overall, customers flow experience ($\beta_{CBE,CFE} = 0.799$; $p\text{-value} < 0.001$), customer involvement ($\beta_{CBE,CI} = 0.223$; $p\text{-value} < 0.001$), customer participation ($\beta_{CBE,CP} = 0.123$; $p\text{-value} = 0.003$) and customer interactivity ($\beta_{CBE,CInt} = 0.129$; $p\text{-value} = 0.001$) exert a positive and direct effect on CBE, supporting hypotheses H1, H3, H5 and H7. Conversely, customer cumulative satisfaction, customer trust, customer commitment and customer WOM referrals were not found as potential drivers of CBE. Hence, hypotheses H9, H11, H12 and H14 were not confirmed.

Table 17 - Overview-hypothesis testing of CBE drivers

No.	Hypothesis			Hypothesis supported	B	SE	β	p-value
1	Customer involvement	->	CBE	Yes	0.086	0.016	0.223	< 0.001
3	Customer participation	->	CBE	Yes	0.07	0.024	0.123	0.003
5	Customer interactivity	->	CBE	Yes	0.068	0.021	0.129	0.001
7	Customer flow experience	->	CBE	Yes	0.504	0.068	0.799	< 0.001
9	Customer cumulative satisfaction	->	CBE	No				
11	Customer WOM referrals	->	CBE	No				
12	Customer trust	->	CBE	No				
14	Customer commitment	->	CBE	No				

Note: B, path coefficients (estimate); SE, standard error; β , standardized path coefficients.

8.4.2 Analysis of the direct and indirect effects on the nomological network of CBE

As stated by some authors (e.g. Brodie *et al.*, 2011; Hollebeek, 2011a; Sashi, 2012), customer cumulative satisfaction, customer WOM referrals, customer trust and customer commitment can be potential consequences of CBE. In this way and giving the fact that H9, H11, H12 and H14 were not confirmed; the research tested the hypotheses of these constructs acted as an outcome of CBE. The results show that customer cumulative satisfaction, customer WOM referrals, customer trust and customer commitment are consequences of CBE (Table 18).

In particular, CBE has a mediating role between the customer involvement and the customer cumulative satisfaction, customer WOM referrals, customer trust and customer commitment (Table 19). As a result, when customers are engage with the brand, their involvement with the brand indirect influence their levels of satisfaction, trust and commitment, and the desire to act as brand advocates. The same happens with the customer's level of interactivity and flow experience. Customer interactivity has an indirect effect on customer cumulative satisfaction, customer WOM referrals, customer trust and customer commitment. In the same way, customer flow experience indirect impacts the same constructs.

Table 18 – Overview –hypothesis testing

No.	Hypothesis			Hypothesis supported	B	SE	β	P-value
1	Customer involvement	-»	CBE	Yes	0.615	0.031	0.747	< 0.001
2 a	Customer involvement	-»	Customer participation	Yes	0.204	0.026	0.306	< 0.001
2 b	Customer involvement	-»	Customer cumulative satisfaction	No				
3	Customer participation	-»	CBE	No				
4 a	Customer participation	-»	Customer interactivity	Yes	0.214	0.049	0.162	< 0.001
4 b	Customer participation	-»	Customer cumulative satisfaction	No				
5	Customer interactivity	-»	CBE	Yes	0.165	0.050	0.176	< 0.001
6 a	Customer interactivity	-»	Customer flow experience	Yes	0.666	0.056	0.860	< 0.001

6 b	Customer interactivity	-»	Customer cumulative satisfaction	No				
7	Customer flow experience	-»	CBE	Yes	0.273	0.065	0.226	< 0.001
8	Customer flow experience	-»	Customer cumulative satisfaction	No				
-	CBE	-»	Customer cumulative satisfaction	Yes	1.068	0.211	1.185	< 0.001
10'a	Customer cumulative satisfaction	-»	Customer commitment	No				
10 b	Customer cumulative satisfaction	-»	Customer trust	No				
10 c	Customer cumulative satisfaction	-»	Customer WOM referrals	No				
-	CBE	-»	Customer WOM referrals	Yes	0.429	0.124	0.39	< 0.001
-	CBE	-»	Customer trust	Yes	1.350	0.340	1.478	< 0.001
13'a	Customer trust	-»	Customer commitment	No				
13 b	Customer trust	-»	Customer WOM referrals	No				
-	CBE	-»	Customer commitment	Yes	1.319	0.095	1.08	< 0.001
15	Customer commitment	-»	Customer WOM referrals	Yes	0.382	0.088	0.424	< 0.001

Note:

$\chi^2/df = 3.143$; GFI = 0.916; CFI = 0.960; TLI = 0.949; PGFI = 0.670; PCFI = 0.750; RMSEA = 0.052; $P[\text{rmsea} \leq 0.05] < 0.185$ (Appendix G); $R^2 = 0.96$.

B, path coefficients (estimate); SE, standard error; β , standardized path coefficients.

Regarding the drivers of CBE, several indirect effects between constructs can be identified.

In this context, despite not being a driver of CBE, customer participation has an important role in the CBE process. It is important to highlight that customer participation indirectly influences CBE and one of its drivers, and has a mediating effect between two of the main drivers of CBE. In this sense, customers' participation

positively influences their engagement with the brand through the interactivity between the customer and the brand that is generated as result of the co-production process ($\beta_{\text{CBE.CP|CInt}} = 0.056$; p-value = 0.005). In the same way, customers' participation indirectly influences their flow experience with brand's Facebook page ($\beta_{\text{CFE.CP|CInt}} = 0.130$; p-value = 0.011). Lastly, customer participation mediates the indirect influence of the customer involvement with the brand and the customer interactivity with it ($\beta_{\text{CInt.CI|CP}} = 0.045$; p-value = 0.010).

Also, important is the pursuit of an interactivity process between the customer and the brand's facebook page that result in a flow experience for the customer, since this contribute to the engagement of the customer ($\beta_{\text{CBE.CInt|CFE}} = 0.151$; p-value = 0.012).

Table 19 provides an overview of all indirect effects.

Table 19 - Overview-indirect effects

Indirect Effects					β	p-value
Customer involvement	->	Customer participation	->	Customer interactivity	0.045	0.010
Customer participation	->	Customer interactivity	->	Customer flow experience	0.130	0.011
				CBE	0.056	0.005
Customer interactivity	->	Customer flow experience	->	CBE	0.151	0.012
Customer involvement	->	CBE	->	Customer cumulative satisfaction	0.525	0.010
				Customer trust	0.590	0.009
				Customer commitment	0.773	0.007
				Customer WOM referrals	0.690	0.014
Customer interactivity	->	CBE	->	Customer cumulative satisfaction	0.259	0.007
				Customer trust	0.290	0.007
				Customer commitment	0.380	0.008
				Customer WOM referrals	0.340	0.004
Customer flow experience	->	CBE	->	Customer cumulative satisfaction	0.121	0.010
				Customer trust	0.135	0.011
				Customer commitment	0.177	0.011
				Customer WOM referrals	0.158	0.010
CBE	->	Customer commitment	->	Customer WOM referrals	0.432	0.005

Note: β , standardized path coefficients.

8.4.3 Analysis of the moderating effects on the nomological network of CBE

The research further tested the moderating effects of customer's perceived brand reputation (BrandRep), customer's perceived brand knowledge (BrandKnow),

customer's identification with the social networking site (ComIde) and trust towards the social networking site (ComTrust) on the CBE process. The effects of the customer's gender and the type of brand perceived by the customer are also tested.

The customers' perceived brand reputation and brand knowledge have a direct impact on CBE and both moderate the causal effect of customer participation on CBE (Table 20). The presence of one of these moderators turns the impact of customer participation on CBE significant. In this sense, the higher the customer's perceived brand reputation, the higher the effect on CBE of customer participation ($\beta_{\text{CBE,CP*BrandRep}} = 0.092$; $p = 0.026$). In the same way, the higher the customer's perception about the brand knowledge, the higher the direct effect of customer participation on CBE ($\beta_{\text{CBE,CP*BrandKnow}} = 0.08$; $p = 0.037$).

Table 20 - Moderating effects: customer's perception of brand reputation and brand knowledge

No.	Hypothesis			Hypothesis supported	B	SE	β	p-value
HA	BrandRep	->	CBE	-	0.635	0.048	0.488	< 0.001
	CI x BrandRep	->	CBE	No				
	CP x BrandRep	->	CBE	Yes	0.135	0.061	0.092	0.026
	CInt x BrandRep	->	CBE	No				
	CFE x BrandRep	->	CBE	No				
HB	BrandKnow	->	CBE	-	0.62	0.04	0.569	< 0.001
	CI x BrandKnow	->	CBE	No				
	CP x BrandKnow	->	CBE	Yes	0.085	0.041	0.080	0.037
	CInt x BrandKnow	->	CBE	No				
	CFE x BrandKnow	->	CBE	No				

Note:

Model fit of the models with the moderators in Appendix H and Appendix I, respectively.

B, path coefficients (estimate); SE, standard error; β , standardized path coefficients.

Regarding the other two moderators, customer's identification with the social networking site and trust in that community, the results are the following (Table 21). Both moderators have a significantly positive and direct effect on CBE. Additionally, customer's identification with the social networking site has a moderating role in relation to the effect of customer involvement and customer participation on CBE. In this sense, the higher the customer's identification with the social networking site, the higher the impact of customer participation on CBE ($\beta_{\text{CBE,CP*ComIde}} = 0.17$; $p < 0.001$). Conversely, this moderating role reduces the causal effect of customer involvement on

CBE. Thus, the higher the customer's identification with the social networking site, the lower is the impact of the customer involvement with the brand on CBE ($\beta_{\text{CBE.CI*ComIde}} = -0.202$; $p < 0.001$). Lastly, trust towards the social networking site has a moderating role in all drivers of CBE, except on customer interactivity. Trust towards the social networking site improves the causal effects of customer participation ($\beta_{\text{CBE.CP*ComTrust}} = 0.219$; $p < 0.001$) and customer flow experience on CBE ($\beta_{\text{CBE.CFE*ComTrust}} = 0.190$; $p = 0.04$). Although, like the moderator customer's identification with the social networking site, it reduces the causal effect of customer involvement on CBE ($\beta_{\text{CBE.CI*ComTrust}} = -0.213$; $p < 0.001$).

Table 21 – Moderating effects: customer's identification with the social networking site and trust in that community

No.	Hypothesis			Hypothesis supported	B	SE	β	p-value
HC	ComIde	->	CBE	-	0.426	0.029	0.561	< 0.001
	CI x ComIde	->	CBE	Yes	-0.098	0.019	-0.202	< 0.001
	CP x ComIde	->	CBE	Yes	0.133	0.03	0.170	< 0.001
	CInt x ComIde	->	CBE	No				
	CFE x ComIde	->	CBE	No				
HD	ComTrust	->	CBE	-	0.427	0.032	0.507	< 0.001
	CI x ComTrust	->	CBE	Yes	-0.113	0.019	-0.213	< 0.001
	CP x ComTrust	->	CBE	Yes	0.193	0.034	0.219	< 0.001
	CInt x ComTrust	->	CBE	No				
	CFE x ComTrust	->	CBE	Yes	0.180	0.088	0.190	0.04

Note:

Model fit of the models with the moderators in Appendix J and Appendix K, respectively.

B, path coefficients (estimate); SE, standard error; β , standardized path coefficients.

Other hypothesis considered in this thesis is if the customer's gender and the type of brand change the structure and the impact of the drivers included in the analysis of CBE (Hypothesis E and Hypothesis F).

Starting by examining the changes and impacts produced by the customer's gender, the following results were obtained (Appendix L). The quality of adjustment of the model with fixed factor loading is not significantly different when compared with the unconstrained model ($\Delta X^2(22) = 30.515$; $p = 0.106$). Hence, it is possible to conclude that factor loadings are invariant in both groups (female and male customers). The model fit quality of the model with fixed factor loadings and regression weights is

significantly worse than the model fit quality of the unconstrained model ($\Delta X^2 (33) = 56,779$; $p = 0.006$). In addition, the model with fixed regression weights also presents a significantly worse quality of adjustment comparing with the model with unconstrained regression weights ($\Delta X^2 (11) = 26,264$; $p = 0.006$). Therefore, causal model is not invariant in both groups. Analysing critical ratios produced by AMOS, for $\alpha = 0.05$, it is possible to conclude that the following paths are significantly different between the two groups (Table 22):

- Customer participation -> customer interactivity
- CBE -> customer cumulative satisfaction

The first effect is stronger in male customers than in female customers. Consequently, the indirect effect of customer participation is also stronger in the case of male customers than in the female customers ($\beta_{\text{CBE,CP|CInt Male}} = 0.044$; $p\text{-value} = 0.012$ versus $\beta_{\text{CBE,CP|CInt Female}} = 0.019$; $p\text{-value} = 0.007$). On the other hand, the effect of CBE on customer cumulative satisfaction is strongest in the case of female customers.

Table 22 – Group Differences: Female versus Male

Hypothesis			Female			Male			Z^{14}
			B	SE	p-value	B	SE	p-value	
Customer involvement	->	CBE	0.657	0.036	< 0.001	0.628	0.06	< 0.001	-0.41
Customer involvement	->	Customer participation	0.163	0.029	< 0.001	0.287	0.058	< 0.001	1.887*
Customer participation	->	CBE	-0.033	0.033	0.306	0.021	0.05	0.679	0.907
Customer participation	->	Customer interactivity	0.158	0.056	0.004	0.416	0.107	<0.001	2.133**
Customer interactivity	->	CBE	0.185	0.054	< 0.001	0.117	0.072	0.102	-0.756
Customer interactivity	->	Customer flow experience	0.709	0.074	< 0.001	0.525	0.079	<0.001	-1.696*
Customer flow experience	->	CBE	0.201	0.063	0.001	0.247	0.117	0.034	0.350

¹⁴ $Z_{0.975} = 1.96$.

CBE	->	Customer cumulative satisfaction	0.665	0.042	< 0.001	0.485	0.064	< 0.001	-2.35**
CBE	->	Customer WOM referrals	1	0.06	< 0.001	0.827	0.096	< 0.001	-1.537
Customer commitment	->	Customer WOM referrals	0.432	0.104	< 0.001	0.130	0.183	0.477	-1.44
CBE	->	Customer trust	0.704	0.043	< 0.001	0.557	0.068	< 0.001	-1.836*
CBE	->	Customer commitment	1.248	0.065	< 0.001	1.164	0.109	< 0.001	-0.662

Note: For a significant level of 0.1 (*), 0.05 (**), 0.01 (***). B, path coefficients (estimate); SE, standard error; Z, critical ratio.

Based on the categorization made by Chernatony and McWilliam (1989) and Chernatony (1993), brands can be described by the extent to which they satisfy performance needs (functionality) and personal expression needs (representationality). In this sense, it was formed two clusters of brands based on the two factors determining by a PCA and a FA (Appendix M). The two principal component explained 82.184% of the total variance¹⁵. The first axis is positively related with the symbolic and emotional dimensions of the brand. Therefore, the axis represents the brand's representationality dimension. The second axis is positively associated with the utility dimension of the brand. Thus, this axis can be interpreted as the brand's functionality dimension. Based on these two factors, it was performed a hierarchical and a non-hierarchical classification (Appendix N).

The analysis of distances between clusters suggests at least two clusters that can be interpreted as brands perceived as lowly representational and functional (Cluster 1) versus brands perceived as highly representational and functional (Cluster 2).

Table 23 – Non-hierarchical classification: two clusters

	Final Cluster Centers	
	Cluster	
	1	2
Symbolic and Emotional	-,82384	,84684
Utility	-,08090	,08316

¹⁵ See in Appendix M, tables of Correlation Matrix, KMO and Bartlett's Test, Communalities, Total Variance Explained and Rotated Component Matrix.

Number of Cases in each Cluster		
Cluster	1	2
Valid	405,000	394,000
Missing	799,000	0,000

The quality of adjustment of the model with fixed factor loading is not significantly different when compared with the unconstrained model ($\Delta X^2 (22) = 17.851$; $p = 0.715$). Therefore, the factor loadings are invariant in both groups, demonstrating the measurement invariance of the model (Appendix O). On the other hand, the model with fixed factor loadings and regression weights presents a significantly worse model fit quality comparing with the unconstrained model ($\Delta X^2 (33) = 65.761$; $p = 0.001$). In addition, the model fit quality of the model with fixed regression weights is also significantly worse than the model fit quality of the model with unconstrained regression weights ($\Delta X^2 (11) = 47.909$; $p < 0.001$). Therefore, causal model is not invariant in both groups. Analysing critical ratios produced by AMOS, for $\alpha = 0.05$, it is possible to conclude that the following paths are significantly different between the two groups (Table 24):

- Customer involvement -» CBE
- Customer involvement -» customer participation
- CBE - » customer cumulative satisfaction
- CBE -» customer trust

The effect of customer involvement on CBE and the effect of CBE on customer cumulative satisfaction and customer trust are higher for brands with low representativeness and functionality than for brands perceived as highly representational and functional. Conversely, the effect of customer involvement on customer participation is higher for brands perceived as highly representational and functional.

Table 24 - Group Differences: brands perceived as lowly representational and functional versus brands perceived as highly representational and functional

Hypothesis			<i>Lowly</i> representational and functional			<i>Highly</i> representational and functional			<i>Z</i> ¹⁶
			B	SE	p-value	B	SE	p-value	
Customer involvement	->	CBE	0,724	0,048	< 0.001	0,58	0,04	< 0.001	-2,308**
Customer involvement	->	Customer participation	0,132	0,036	< 0.001	0,258	0,038	< 0.001	2,394**
Customer participation	->	CBE	-0,074	0,044	0,097	0,029	0,033	0,375	1,86*
Customer participation	->	Customer interactivity	0,197	0,083	0,018	0,207	0,061	< 0.001	0,098
Customer interactivity	->	CBE	0,134	0,064	0,035	0,157	0,063	0,012	0,254
Customer interactivity	->	Customer flow experience	0,677	0,088	< 0.001	0,698	0,074	< 0.001	0,186
Customer flow experience	->	CBE	0,114	0,081	0,155	0,303	0,08	< 0.001	1,656*
CBE	->	Customer cumulative satisfaction	0,724	0,057	< 0.001	0,521	0,045	< 0.001	-2,802***
CBE	->	Customer WOM referrals	1,03	0,078	< 0.001	0,895	0,067	< 0.001	-1,317
Customer commitment	->	Customer WOM referrals	0,340	0,168	0,043	0,368	0,098	< 0.001	0,141
CBE	->	Customer trust	0,773	0,058	< 0.001	0,559	0,044	< 0.001	-2,929***
CBE	->	Customer commitment	1,182	0,078	< 0.001	1,3	0,081	< 0.001	1,051

Note: For a significant level of 0.1 (*), 0.05 (**), 0.01 (***). B, path coefficients (estimate); SE, standard error; Z, critical ratio.

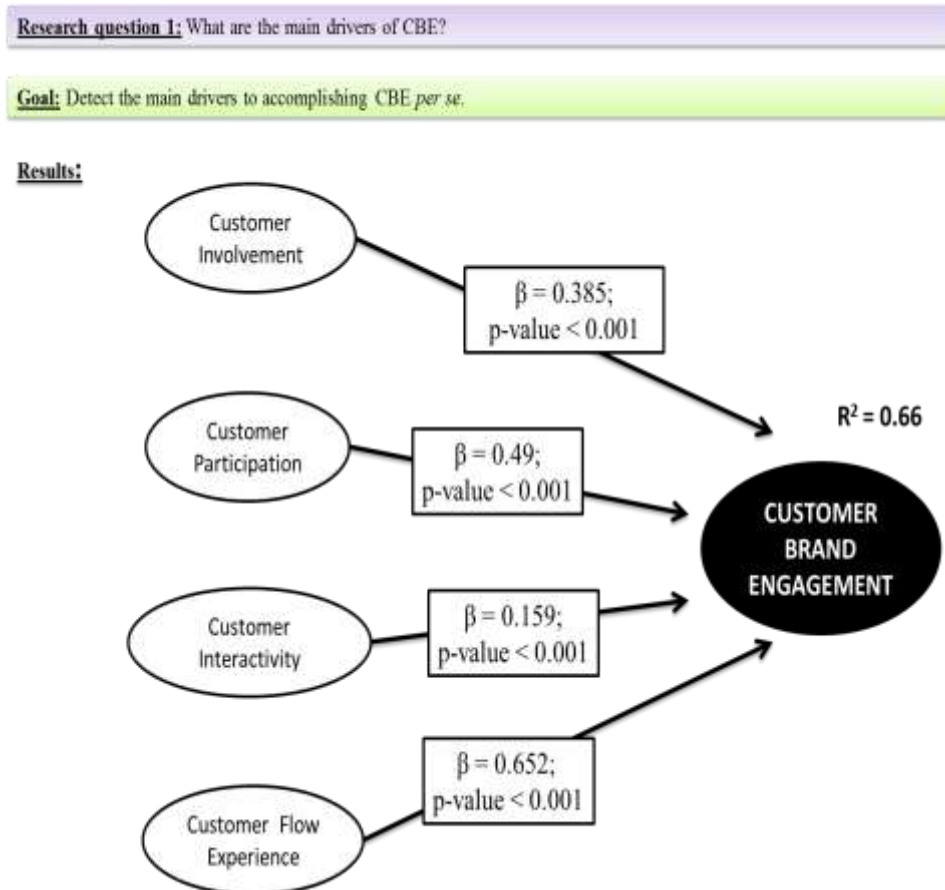
¹⁶ $Z_{0,975} = 1.96$.

8.5 Data analysis overview

This section presents the integration of analysis resulting from the three research questions. In fact, the understanding of CBE process results from the integrated analysis of three aspects: (i) the identification of the required antecedents of the CBE process; (ii) the understanding of potential direct and indirect impacts; (iii) the examination of possible moderating effects, the effect of customer's gender and the type of brand perceived by the customer on the nomological network of CBE.

Thus, based on the results of the previous sections, the research seeks now to answer to each of the three research questions. Figures 13, 14, 15, 16 and 17 provide an overview of the results.

Figure 13 – Summary of conclusions of the first research question



Note:

$\chi^2/df = 3.075$; GFI = 0.958; CFI = 0.976; TLI = 0.967; PGFI = 0.607; PCFI = 0.696; RMSEA = 0.051; $P[rmsea \leq 0.05] < 0.391$.

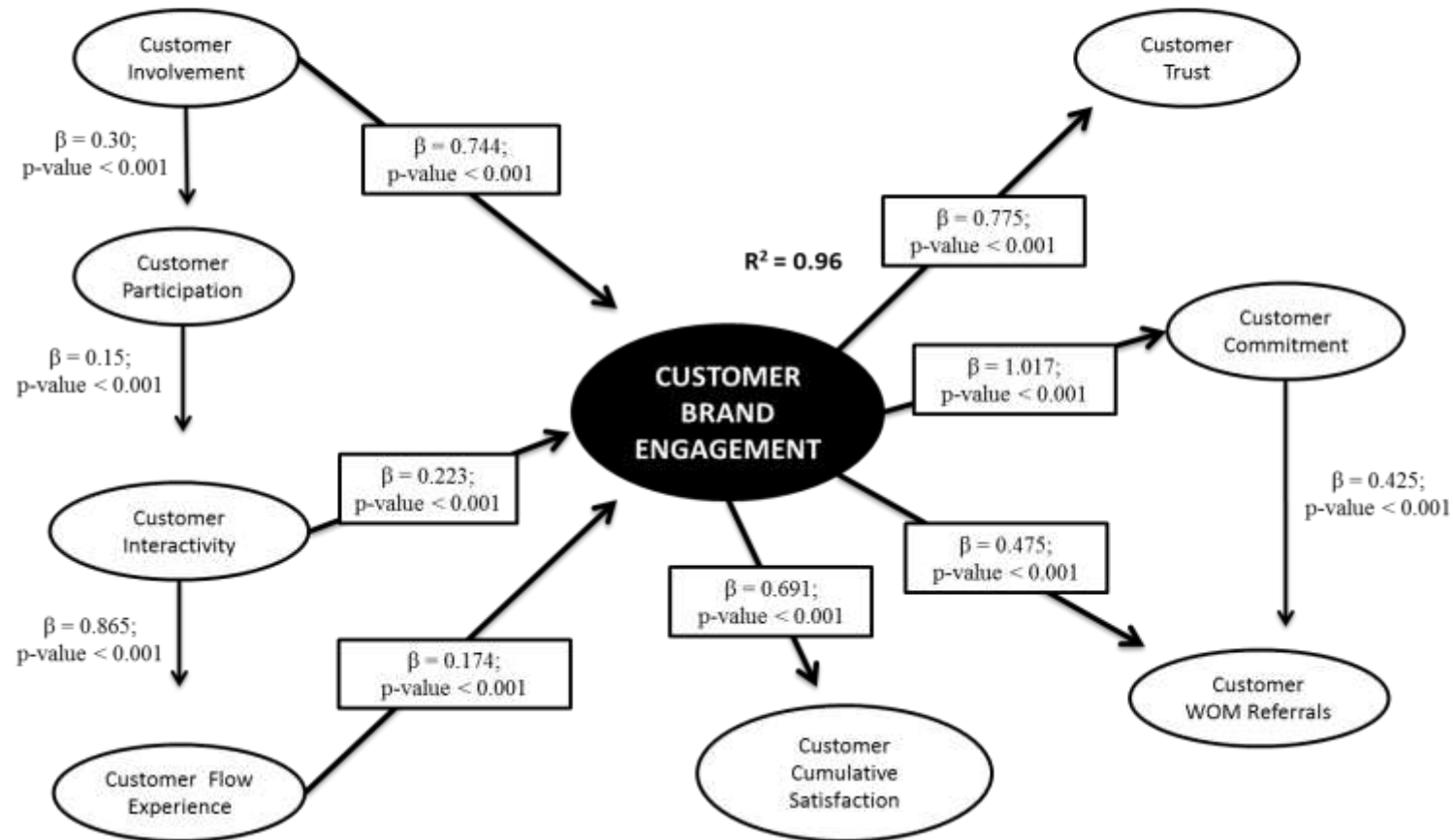
β, standardized path coefficients; R², coefficient of determination.

Figure 14 - Summary of conclusions of the second research question: direct and mediating effects

Research question 2: What are the factors that directly and indirectly influence the CBE process?

Goal: Clarify the interactions between the CBE drivers identified by the first research question

Results:



Note:

$\chi^2/df = 3.142$
 GFI = 0.914
 CFI = 0.959
 TLI = 0.949
 PGFI = 0.688
 PCFI = 0.769
 RMSEA = 0.052
 $P[rmsea \leq 0.05] < 0.184$

β, standardized path coefficients

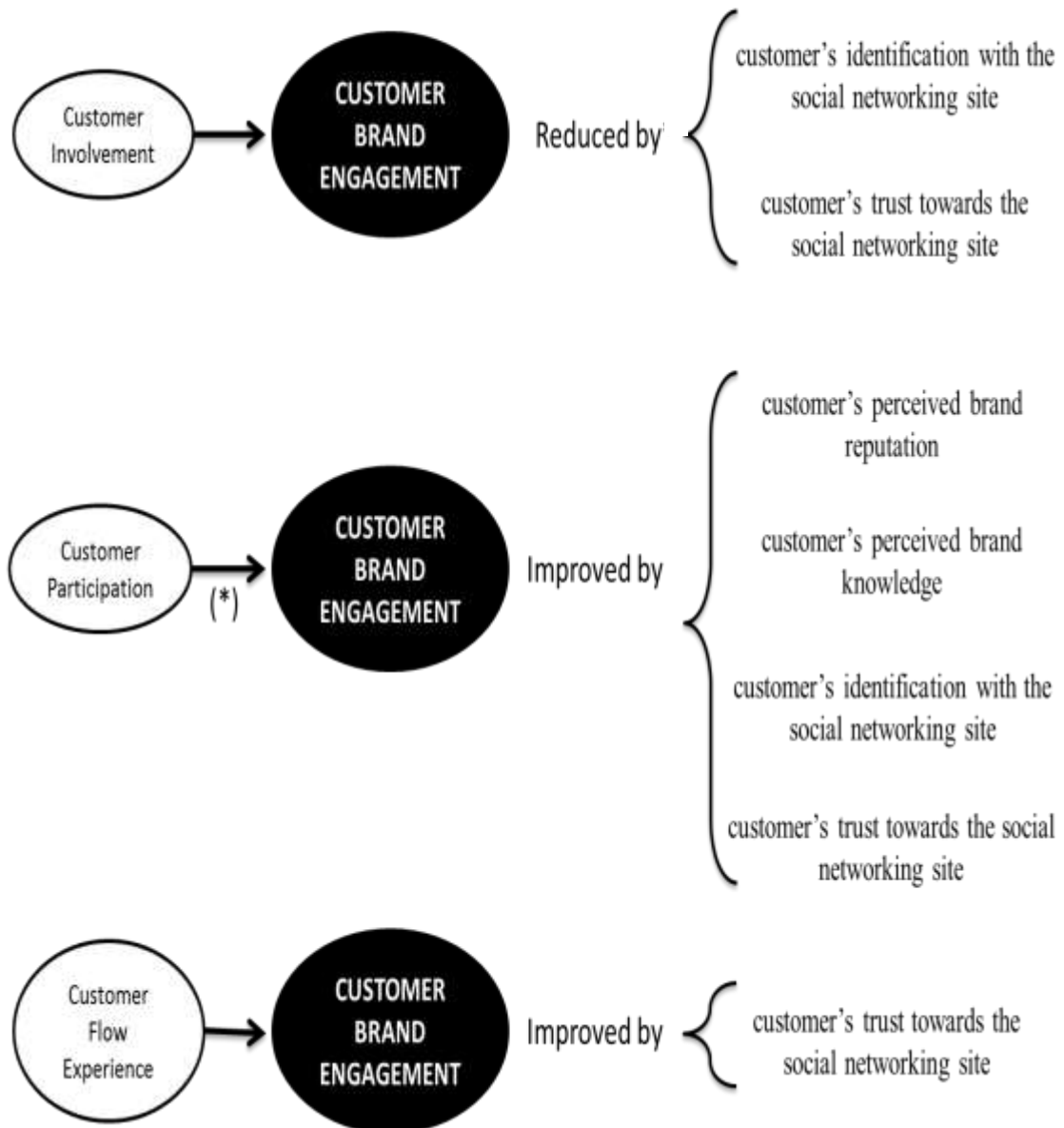
R², coefficient of determination

Figure 15 - Summary of conclusions of the third research question: moderating effects

Research question 3: What moderating effects are expected to occur in the CBE process?

Goal: Examine the moderating effects on CBE

Results:



(*) This effect is only significant in the presence of one of these moderators.

Figure 16 - Summary of conclusions of the third research question: female versus male customers

Research question 3: What moderating effects are expected to occur in the CBE process?

Goal: Determine if the customer's gender changes the structure of the CBE model

Results:

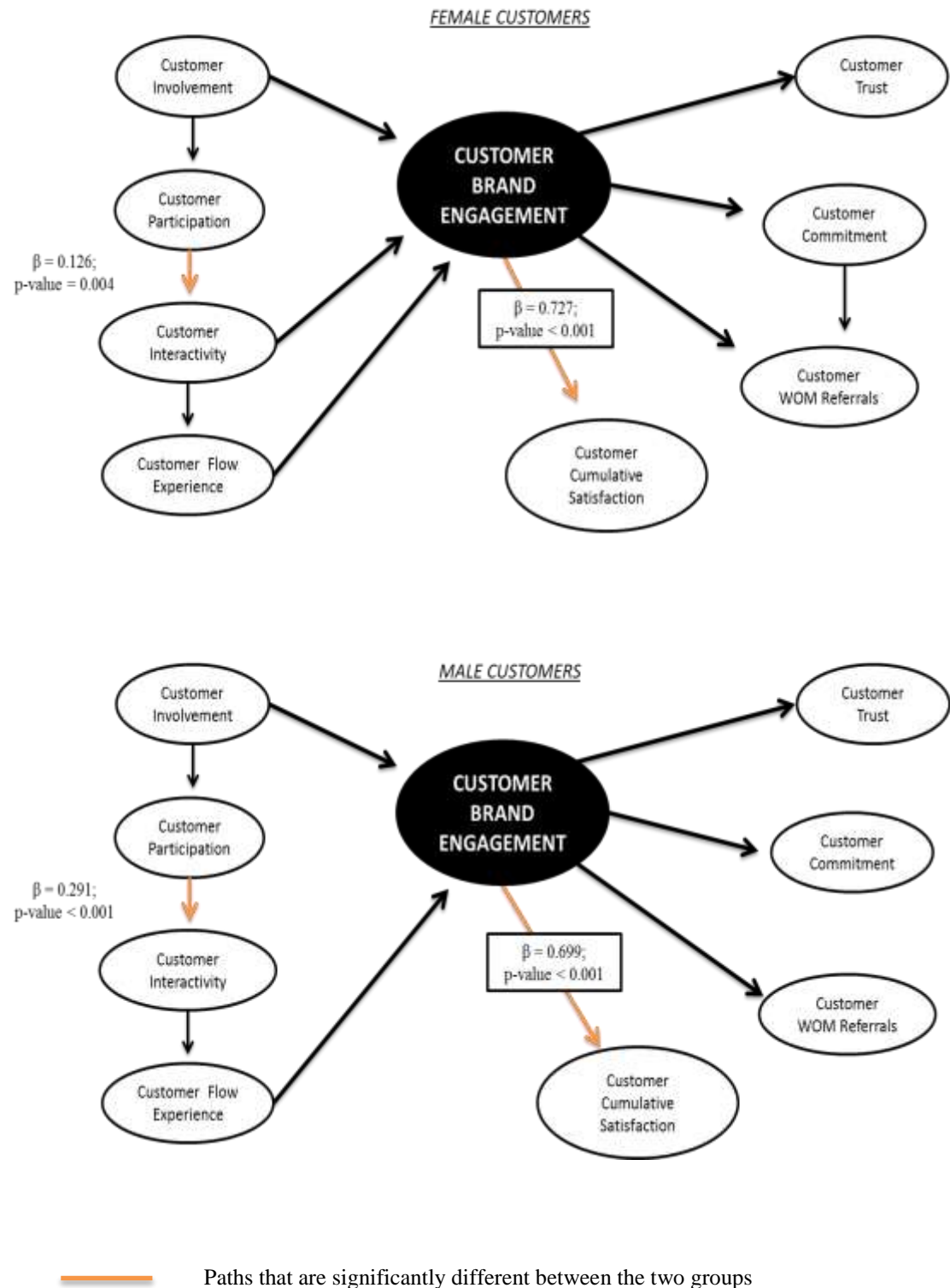
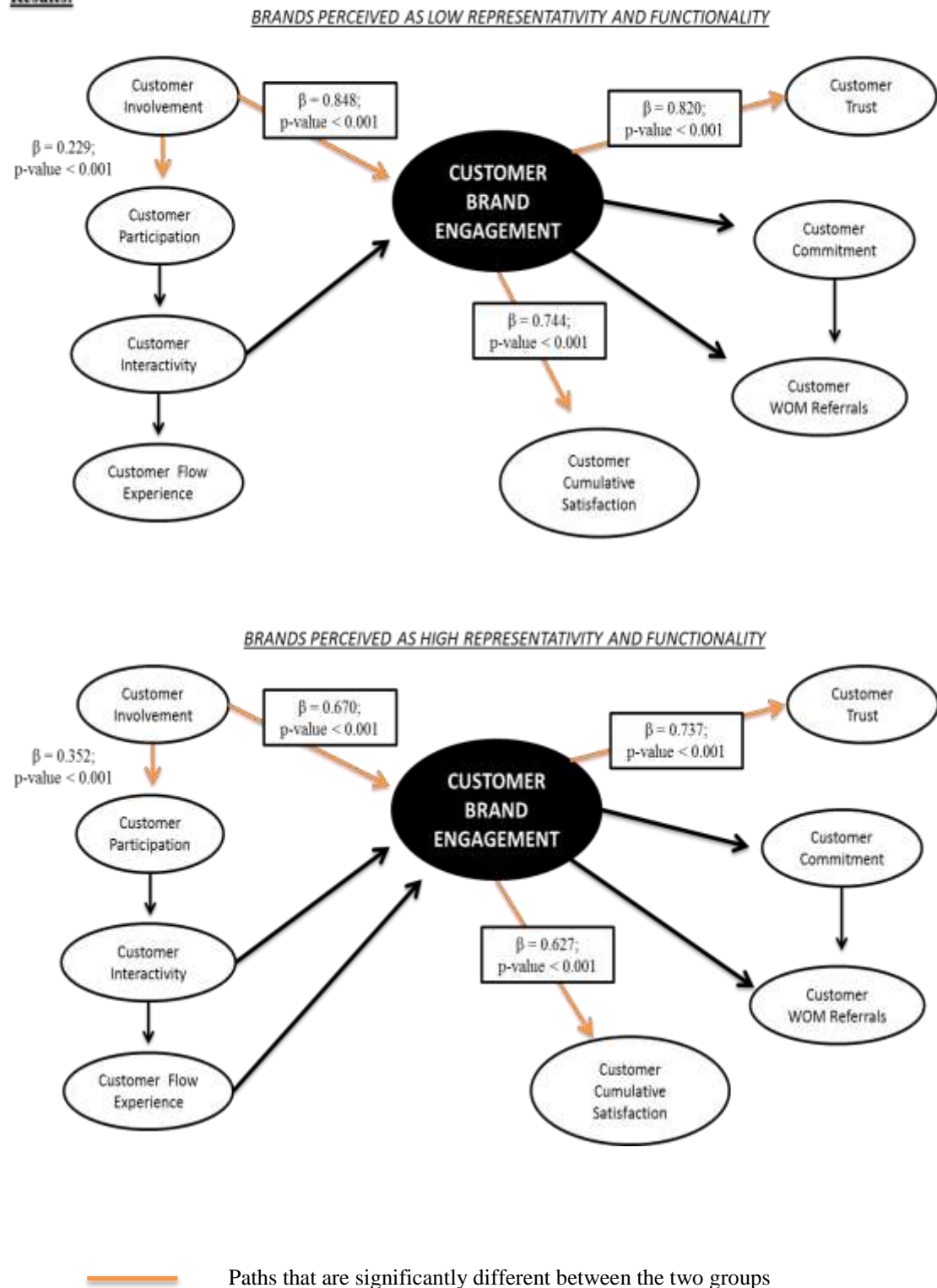


Figure 17 - Summary of conclusions of the third research question: brands perceived as low representativity and functionality versus brands perceived as high representativity and functionality

Research question 3: What moderating effects are expected to occur in the CBE process?

Goal: Determine if the customer's perception of the type of brand changes the structure of the CBE model

Results:



8.6 Conclusion

Data analysis reveals that the main direct effects on CBE are the customer with the brand, the customer interactivity with the brand's Facebook page and the customer flow experience in the brand's Facebook page. Moreover, the analysis discloses that customers who engaged with the brand in context like a Facebook page are more likely to offer positive WOM, be satisfied and committed to this brand, and trust in it. Concerning the moderates tested in this research, trust towards the social networking site and customer's identification with the social networking site are the two that most affect the causal effects of the drivers on CBE. Furthermore, results show that the model is not completely invariant regarding customer's gender and type of brand perceived by the customer.

In the next section (Section 9), the main conclusions, theoretical and managerial implications as well as limitations and suggestions for future research are presented.

CHAPTER III

DISCUSSION AND CONCLUSIONS

9. Conclusion

The central problem of this doctoral thesis is to understand the CBE process by identifying the key drivers and brand constructs related to its process and integrating them into a comprehensive model. The research addresses this problem by studying the relationship between the customer and the brand with which he/she feels engaged. In order to examine this issue, Chapter I reviewed the literature on brands, brands communities, engagement and more specifically on the explanation of customer brand engagement and its required and potential antecedents. Then it was presented and justified the research questions, the conceptual model built on the literature review and the research hypotheses. In Chapter II were exposed and justified the methodological options, as well as presented the results of the research. To complete this doctoral thesis, in this section are presented the main conclusions (Section 9.1) and contributions (Section 9.2), as well as its limitations and suggestions for future research (Section 9.3).

9.1 Summary of conclusions

The conclusions presented in this section are organized according to the three research questions set out in Section 5: (i) What are the main drivers of CBE?; (ii) What are the factors that directly and indirectly influence the CBE process?; and (iii) What moderating effects are expected to occur in the CBE process?.

9.1.1 What are the main drivers of CBE?

Based on the results, in a context of a social networking site like Facebook, the key drivers to accomplish CBE *per se* are customer flow experience, customer involvement, customer interactivity and customer participation.

In particular, customer flow experience was found to be the driver with the highest positive and direct impact on CBE. This indicates that customers who are deeply immersed in searching brand information on Facebook, and find this particular activity intrinsically fun, are the ones more likely to engage. In addition, the findings of this study show that customer involvement has also an important positive and direct effect on CBE, which is consistent with prior studies (e.g. Hollebeek *et al.*, 2014; Leckie *et al.*, 2016). In this sense, the main drivers of CBE entail the promotion of the full concentration and involvement of the customer in such a way that the brand's social networking site is perceived by its inherent pleasure, interest and relevance. This way,

customers are motivated by the branded content in the social networking sites to engage with the brand. Therefore, in addition to meet the needs and interest of the brand's target audience, branded content should also capture their attention, provide an enjoyable experience and resonate with the customer on a personal level. For example, the Nike¹⁷'s Facebook page keeps a balance between the content about new products, the development of new engineering or science experiments in terms of design and encouragement videos. Additionally, the brand has separate pages for each of their product lines to better target their different markets along with an “umbrella” page that maintains a consistent image of the brand. A concrete example of that is the “freaky Friday” themed video, “The Switch” (released during Euro 2016), where Cristiano Ronaldo switches bodies with a fan. The video was released in the Nike football page with the inspirational slogans “*Um momento pode mudar tudo*”¹⁸, “*Acreditar é contagiante*”¹⁹ and “*Uma nação valente. Jogamos unidos. Vencemos juntos*”²⁰. The video was also released in the Nike’s “umbrella” Facebook page with the hashtag #sparkbrilliance. Another example, is Coca-Cola²¹. Coca-cola released several emotional memes supporting the Portugal national football team, the funny video “*Coca-Cola com o EURO 2016*” along with the phrase “*Na Coca-Cola, queremos viver a UEFA EURO 2016TM contigo, não penses mais e junta-te aos adeptos!*”²² and the hashtag #vibracomosadeptos. This branded content became viral with thousands of visualizations, and numerous comments and re-posts on Facebook.

At the same time, the findings also support the customer’s interactivity experience with the social networking site and the customer co-production of content as the third and fourth most important drivers of CBE. In this sense, the customer’s perceived control over interaction, responsiveness from the social networking site and personalization of the reply play a decisive role in the CBE process. Considering as examples the ten most mentioned brands in this study, all of them have a high response rate. Direct response to requests for help or complaints from customers is made within few hours, except for Zara, Apple, Nike and Salsa that usually respond within one to

¹⁷ The second most mentioned brand in this study.

¹⁸ One moment can change everything.

¹⁹ Believing is contagious.

²⁰ A brave nation. We played together. We will win together.

²¹ The sixth most mentioned brand in this study.

²² Coca-Cola wants to live UEFA EURO 2016 with you, do not think more and join the fans!

two days. Moreover, the customer participation was measured through customers' contribution (e.g. comments and shares) and creation (e.g. producing and publishing) of brand related content. As such, these participation levels, which go beyond the mere consumption of brand information or content, were found to have a direct effect on CBE.

9.1.2 What are the factors that directly and indirectly influence the CBE process?

The evaluation of the CBE process is a complex matter and as stated by Brodie *et al.* (2011, 2013), CBE process is an interaction of relevant sub-processes. In this sense and based on the results of the first research question, it was tested a more comprehensive model of CBE.

The results show that customer involvement, customer interactivity and customer flow experience are the main drivers of CBE, when the outcomes of CBE are customer commitment, customer trust, customer cumulative satisfaction and customer WOM referrals. In this context, customer involvement appears as the drivers with highest positive and direct impact in the development of CBE.

Customer interactivity and customer flow experience are indirect influenced by the level of involvement with the brand and participation, respectively. The experience of co-production of brand-related content mediates in a positive way the effect that the customer's recognition of the brand's interest and relevance has on the customer's perceived interactivity with the brand's Facebook page. Likewise, the customer's perceived interactivity mediates the effect that the experience of co-production of content for the brand has on the customer flow experience.

Moreover, when customers are completely immersed in the social networking site and enjoying it, their interactivity experience is better perceived, contributing to engage the customer with the brand. In the same way, when customers perceived interactivity as a pleasant experience (regarding control, responsiveness and personalization), their participation with content contribute to engage the customer.

9.1.3 What moderating effects are expected to occur in the CBE process?

Despite the customer involvement appears as the driver with the highest impact, the importance of stimulating customer involvement is reduced, when the effects of moderators like customer's identification with the social networking site and trust

towards it are considered in the analysis. In the presence of high levels of customer's identification and trust in the social networking site, the influence of the brand's interest and relevance is lower. Conversely, particular trust towards the social networking site, reinforce the effects of the other two drivers on CBE.

Customer participation *per se* is not capable of generating CBE, however, in the presence of the moderators considered in this study, the results show that customer participation is a driver of CBE. Like Casaló *et al.* (2007) point out the importance of trust in the social networking site, this study reveals that customer's perceived brand reputation and brand knowledge, as well as customer's identification with the social networking site are also important. Therefore, customers who have an active participation are more likely to engage with brand, when they have a strong and trusting connection with the social networking site of the brand, perceive to have some knowledge about the brand and consider that the brand has a high reputation.

The factorial structural of the model examined in this study is invariant when considered different customer's gender and different types of brands. Nevertheless, some causal effects present significantly differences.

According to the results, female customers when engage with the brand demonstrate a higher level of satisfaction. On the other hand, stimulate the co-production of content by male customers result in a higher level of perceived interactivity with brand's Facebook page and consequently a higher level of CBE.

In the case of brands that are perceived as having low ability to satisfy customers' needs and to express customers' feelings about their personality, it is important to foster the involvement of the customer with the brand. Moreover, in the case of these brands, the results of engaging the customer will be stronger, namely in terms of customer trust and satisfaction. Conversely, in the case of brands that satisfy customers' utilitarian and personal expressions desires, encouraging the involvement of the customer with the brand will only result in a higher level of customer participation and consequently of customer interactivity with the brand's Facebook page.

9.2 Contribution and implications

CBE is considered the most desired quality in any customer-company relationship. However the understanding is partial and systematic research on its antecedents is still lacking (France *et al.*, 2016; Leckie *et al.*, 2016). The purpose of this doctoral thesis, by identifying and examining CBE antecedents and testing whether and how they impact CBE, was to fill in these gaps, and contribute with new theoretical insights and practical strategies for this field of study.

9.2.1 Theoretical implications

Theoretically, the main contribution of this study is its consolidated and empirical approach to the study of the drivers of CBE.

Unlike previous conceptualizations (e.g. Hollebeek *et al.*, 2014; Leckie *et al.*, 2016; Vivek *et al.*, 2012), the empirical approach of this study considers the analysis of all the (required and potential) antecedents, as well as the impact of some crucial mediators and moderators. Additionally, by developing and testing a more comprehensive model of the simultaneous effects of several key drivers, this study improves the understanding about CBE and contributes with new insights.

Regarding the nomological network of CBE, the majority of the researchers have offered only conceptual guidelines and, as a result, the nomological network of CBE is still in its embryonic stage of development. So far, this study is the first to investigate and to empirically validate the effects of all identified CBE antecedents on the literature. This consolidation aims to demonstrate that much can be learned by studying the logic of human and interpersonal relations in general.

Additionally, although most studies focus in customer involvement, interactivity and participation as required antecedents of CBE (e.g. Brodie *et al.*, 2013; France *et al.*, 2016; Hollebeek, 2011a; Leckie *et al.*, 2016), this research concludes that CBE, in a context like a Facebook page, may not be a result of only these drivers. This study also reveals that the role of the customer participation as a required antecedent is dependent of individual-level factors, such as customer's perceived brand reputation, customer's perceived brand knowledge, customer's identification with the social networking site and trust towards it.

Moreover, the online flow experience has never been empirically considered in a CBE study. So far, this driver has received comparatively less attention and the studies about it in a context of CBE are conceptual and tend to discuss the construct as a potential antecedent (Mollen and Wilson, 2010; Brodie *et al.*, 2011). The results of this research advocate that customer flow experience is a required driver of CBE and the most important in generating CBE *per se*.

Furthermore, the findings suggest that customer's perception of the interactivity of the brand's Facebook page, regarding control, responsiveness and personalization, may generate a reinforcing of CBE process. Customers who realize the brand's Facebook page as interactive will be more immersed in its content and enjoy it more, and this in turn, may generate higher CBE.

Another contribution of this research is regarding the methodological approach. Most of the existing studies on CBE are conceptual or qualitative. Consequently, their results are limited, while this research has a large sample of customers, leading to more generalizable findings. In the same way, most studies have focused their analysis on a set of brands that they consider to be highly engaging (for example, mobile phone service brands). This research assumed a different approach. Rather than forcing customers to choose from a set of brands, one that they felt more engaged with, the study chose to ask directly what this brand was. Thus, the findings are based on brands chosen by the customer (from the customer point of view, that is the brand with which he/she is more engaged) and not by the researcher.

In this sense, the study allows to fulfil the gap by providing theoretical understanding of how to engage customers in a context of a brand's Facebook page.

9.2.2 Managerial implications

On a managerial level, the research provides managers an enhanced understanding about the emerging CBE concept and process, which can be used to reinforce and redefine focused strategies and tactics.

Currently, managers are constantly trying to improve CBE and assess key performance indicators that contribute to generate high CBE levels. Additionally, little is known about how to approach social media in a way that maximizes engagement. Although marketers receive advice regarding the execution of message delivery in social media, they receive little guidance on how different message strategies will affect

processing and engagement. In this sense, the findings of this research can facilitate the development of practical insights into brand aspects and performance dynamics that may lead to stronger brands. Moreover, by empirically testing the key drivers of CBE, this study provides managers with strategic tools. For instance, the findings show that companies should reinforce strategies and tactics that promote high levels of customer flow experience, customer involvement and customer interactivity.

In this sense, managers should design effective communication tools that allow and stimulate the immersion and sensation of escapism of the customer during navigation on the brand's Facebook page, as well as the customer's enjoyment. For example, companies can include in their Facebook pages tabs dedicated to their events, open job opportunities, tips (e.g. fashion trends, latest fashion ideas), videos to spread awareness, compelling photos and GIFs, positive messages about current events, visitor posts about the brand, contests (e.g. to give coupons or polls about future product names). Additionally, they can take advantage of the Facebook's call-to-action button and add a "Shop Now" or a store locator application.

In the same way, companies should seek to drive active involvement of existing customers. To do that, companies should constantly analyze the evolution of the needs, interests and expectations of its customers and members of its social networking sites. The branded content of the Facebook page should be designed according to the customers' interests and demands, and not with those of the company which promotes. Online contents and experiences that stimulate the customer curiosity and personal interest create an enjoyable environment favorable to motivating customers to engage with the brand.

Simultaneously, companies should promote and provide an environment that stimulates communication among members, interactivity and group cohesion in the social networking site. For example, in order to show customers and followers that the brand is listening their needs and is committed to responding to comments, companies can add to tab "About" their typically frequency of respond to customers' inquiries. Customer service is essential on Facebook. By developing processes to support these specific customer interactions, companies can increase customer's trust and customer's identification with the brands Facebook page, which in turn help to get engaged with customers. Moreover, by asking customers for suggestions or promoting

communication among members, companies can also manage the customer involvement with the brand and the customer flow experience with the brand's Facebook page. Instead of dealing with customers as recipients of brand initiatives, companies should focus on a process that becomes receptive to the insights coming from the daily customer-brand encounters on the brand's Facebook page.

By enhancing the drivers previously mentioned, companies can directly stimulate CBE, but they can also leverage the CBE process. This can be important, when, for example, companies are not able to take track of the constantly evolution of their customer's needs, interests or expectations. By promoting customer's trust and cohesion between the active members of the brand's Facebook page, companies can improve the customer's motivation to engage through interactivity and participation. One way to keep the members connected is through fun hashtags like #TRF (used by Zara²³ and stands for Trafaluc, which is said to be slang for "I have to buy this now"), #TasteTheFeeling (used by Coca-Cola²⁴ during this summer) or #FindFocus (used by Adidas²⁵).

In the same way, by offering detailed information about products of the brand or promoting an active and trustworthy dialogue between members of the brand's Facebook page (e.g. by organizing meetings or online/offline activities among members), companies can engage their customers. However, this process must provide psychic benefits to the customer, whether in the form of trust, self-identification, or empowerment by information. In this case, companies should seek for ways to generate member-to-content and member-to-member interactions about brands, encourage co-production of brand-related content, in terms of production and publication of brand-related content that others customers can consume (e.g. post product reviews, produce and upload branded videos, music and pictures). By getting customers to comment and to share their opinions about the content on the brand's Facebook page, created either by the brand itself or other visitors, companies can better know their customers, which in turn give them more tools to enhance CBE.

²³ The most mentioned brand in this study.

²⁴ The sixth most mentioned brand in this study.

²⁵ The fourth most mentioned brand in this study.

9.3 Limitations and suggestions for future research

The doctoral thesis has empirically validated a CBE model. However, not without some limitations, which may help define new lines of research. The limitations relate with (i) the empirical study and (ii) the methodological options.

One limitation of this research is that CBE is contextual. This research relied upon data of only one social networking site (Facebook) to test the hypotheses. Although the concepts presumably apply to other platforms and communities, generalizations of the findings to other contexts should be performed with care. Therefore, future research can test the same nomological network of CBE in other social media contexts, such as Twitter or Instagram.

Secondly, our research could also be extended to include other dimensions and moderators. Namely, future studies could develop a comparative analysis between millennials customers versus “old” customers and other individual characteristics, such as customers’ cumulative experiences with the brand. Also, considering that literature increasingly emphasizes the role of customer-to-customer relationships, the interaction between members of the virtual brand community could also be examined as an additional dimension of CBE.

Thirdly, CBE has a valence. This research only considers the motivations that lead customers to engage with the brand (the positive valence of CBE), leaving aside the neutral and negative valence of CBE identified by van Doorn *et al.* (2010), Hollebeek and Chen (2014) and Villiers (2015). It would also be interesting to investigate possible motives that may lead to relationship ending. This would contribute to existing literature and would help companies understand the drivers of customer disengagement.

Fourthly, according to van Doorn *et al.* (2010), CBE has a purpose. This research considers as outcomes of CBE customer cumulative satisfaction, customer trust, customer commitment and customer WOM referrals. It would also be interesting to investigate emotional brand attachment, self-brand connection, or co-creation of value as outcomes of CBE.

Finally, CBE is a dynamic process. In this study, data collection was limited to a snapshot of customers at a specific point in time. Therefore, future researchers may adopt a longitudinal approach that will be able to contribute with new insights about the different CBE stages, dynamics and triggers.

In conclusion, this doctoral thesis should not be seen as a completed research project, but as a step that should be increased in subsequent studies. This research is, therefore, a starting point for further research and the search for answers to new questions.

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APPENDICES

Appendix A

Questionário

Este questionário realiza-se no âmbito de uma Tese de Doutoramento em Marketing e Estratégia da Faculdade de Economia da Universidade do Porto. Com este questionário pretende-se estudar a relação que os consumidores têm com as marcas.

O consumidor tem que ser fã da marca no Facebook.

A participação neste questionário é anónima e todos os dados serão tratados com confidencialidade.

A sua colaboração é muito importante.

Pense numa marca que tenha um forte significado e importância para si*
(escreva por favor o nome dessa marca)

Com base na marca que escolheu responda por favor às seguintes questões:

Como é que classifica as seguintes afirmações:*

	1 (discordo em absoluto)	2	3	4	5	6	7 (concordo totalmente)
Sou apaixonado por esta marca	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Tenciono continuar a usar esta marca	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Sinto-me entusiasmado quando interajo com a marca no Facebook	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Tenho orgulho em usar esta marca	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Dedico mais tempo no Facebook a esta marca do que a qualquer outra	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Sinto-me feliz quando interajo com a marca no Facebook	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Por que razão compra esta marca? *

	1 (minoritariamente)	2	3	4	5	6	7 (maioritariamente)
Razões utilitárias (ex. por questões funcionais ou económicas, descontos de fidelidade, promoções)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Simbologia da marca (ex. a marca está associada a um determinado status social)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Razões emocionais (ex. experiência proporcionada pela marca, prazer em usar/comprar uma determinada marca)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Como é que classifica a reputação da marca? *

1 2 3 4 5 6 7

Fraca ☐ ☐ ☐ ☐ ☐ ☐ ☐ Excelente

Como é que classifica o seu conhecimento sobre a marca?*

1 2 3 4 5 6 7

Fraco ☐ ☐ ☐ ☐ ☐ ☐ ☐ Excelente

Nas redes sociais da marca, com que frequência: *

	Raramente (pelo menos 1 vez por ano)	Pelo menos 1 vez por mês	De 15 em 15 dias	Pelo menos 1 vez por semana	Quase todos os dias	Todos os dias	Mais do que uma vez por dia
Vê conteúdos sobre a marca e/ou comentários dos outros consumidores	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Contribui com conteúdos sobre a marca (por ex. comentários, participação no fórum da marca)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Cria e/ou publica conteúdos relacionados com a marca (por ex. vídeos, imagens, artigos sobre a marca)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Confia na comunidade da marca?*
(na opinião dada pelos outros consumidores da marca)

1 2 3 4 5 6 7

Pouco ☐ ☐ ☐ ☐ ☐ ☐ ☐ Muito

Identifica-se com a comunidade da marca?*
(com os comentários e opiniões dos outros consumidores)

1 2 3 4 5 6 7

Pouco ☐ ☐ ☐ ☐ ☐ ☐ ☐ Muito

Como é que classifica as seguintes afirmações:*

	1 (discordo em absoluto)	2	3	4	5	6	7 (concordo totalmente)
Quando visito a página de Facebook da marca, sinto que controlo a sua consulta	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Se eu quiser posso questionar a empresa diretamente para mais perguntas sobre a marca	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
A página de Facebook da marca consegue responder às minhas necessidades por informação	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Abstraio-me de tudo, quando estou na página de Facebook da marca	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Gosto de visitar a página de Facebook, independentemente de querer ou não comprar um produto ou serviço da marca	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Procuro informação sobre a marca apenas por diversão	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Classifique a marca que escolheu quanto à satisfação:*

	1 (pouco)	2	3	4	5	6	7 (muito)
Quão ideal considera ser esta marca?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Quão satisfeito você está com a marca?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Como é que classifica as seguintes afirmações:*

	1 (discordo em absoluto)	2	3	4	5	6	7 (concordo totalmente)
Em comparação com outras marcas, esta é uma marca muito importante para mim	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Considero que esta marca é mais interessante, do que as restantes	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Esta marca significa muito para mim	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Esta marca desempenha um papel importante na minha vida	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Como é que classifica as seguintes afirmações:*

	1 (discordo em absoluto)	2	3	4	5	6	7 (concordo totalmente)
É uma marca que corresponde às minhas expectativas	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Confio na marca	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
É uma marca que nunca me decepciona	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
É honesta e sincera na abordagem ao consumidor	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Esta marca faz qualquer esforço para me satisfazer	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Gosto desta marca	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Tenho uma relação especial com esta marca	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Seria muito difícil para mim mudar de marca	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Deixar de usar esta marca seria custoso para mim	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Como é que classifica as seguintes afirmações:*

	1 (discordo em absoluto)	2	3	4	5	6	7 (concordo totalmente)
Esta é a marca que mais vezes recomendo a outras pessoas	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Quando falo desta marca, tendo a falar dela em grande detalhe	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Tenho apenas coisas positivas a dizer sobre esta marca	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Tenho orgulho de dizer aos outros que uso esta marca	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Se pretender fazer alguma observação acerca do questionário poderá fazê-lo nesta caixa de texto.

Idade*

- ☐ 18 - 30 anos
- ☐ 31 - 64 anos
- ☐ mais de 65 anos

Género*

- ☐ Feminino
- ☐ Masculino

Nível de instrução *

- ☐ Ensino Básico (até ao 9º ano)
- ☐ Ensino Secundário
- ☐ Licenciatura
- ☐ Mestrado ou Doutoramento

Obrigada pela sua colaboração!

Appendix B

→ Frequency tables

Age

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid 1	626	78,3	78,3	78,3
2	172	21,5	21,5	99,9
3	1	,1	,1	100,0
Total	799	100,0	100,0	

Gender

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid 1	571	71,5	71,5	71,5
2	228	28,5	28,5	100,0
Total	799	100,0	100,0	

EducationalLevel

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid 1	5	,6	,6	,6
2	168	21,0	21,0	21,7
3	350	43,8	43,8	65,5
4	276	34,5	34,5	100,0
Total	799	100,0	100,0	

Vigor1

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid 1	27	3,4	3,4	3,4
2	26	3,3	3,3	6,6
3	51	6,4	6,4	13,0
4	134	16,8	16,8	29,8
5	202	25,3	25,3	55,1
6	176	22,0	22,0	77,1
7	183	22,9	22,9	100,0
Total	799	100,0	100,0	

Vigor2

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid 2	13	1,6	1,6	1,6
3	34	4,3	4,3	5,9
4	51	6,4	6,4	12,3
5	124	15,5	15,5	27,8
6	206	25,8	25,8	53,6
7	371	46,4	46,4	100,0
Total	799	100,0	100,0	

Dedication1

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1	60	7,5	7,5	7,5
	2	74	9,3	9,3	16,8
	3	100	12,5	12,5	29,3
	4	176	22,0	22,0	51,3
	5	152	19,0	19,0	70,3
	6	130	16,3	16,3	86,6
	7	107	13,4	13,4	100,0
	Total	799	100,0	100,0	

Dedication2

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1	22	2,8	2,8	2,8
	2	47	5,9	5,9	8,6
	3	71	8,9	8,9	17,5
	4	147	18,4	18,4	35,9
	5	145	18,1	18,1	54,1
	6	168	21,0	21,0	75,1
	7	199	24,9	24,9	100,0
	Total	799	100,0	100,0	

Absorption1

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1	180	22,5	22,5	22,5
	2	114	14,3	14,3	36,8
	3	120	15,0	15,0	51,8
	4	173	21,7	21,7	73,5
	5	102	12,8	12,8	86,2
	6	57	7,1	7,1	93,4
	7	53	6,6	6,6	100,0
	Total	799	100,0	100,0	

Absorption2

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1	122	15,3	15,3	15,3
	2	101	12,6	12,6	27,9
	3	134	16,8	16,8	44,7
	4	167	20,9	20,9	65,6
	5	128	16,0	16,0	81,6
	6	85	10,6	10,6	92,2
	7	62	7,8	7,8	100,0
	Total	799	100,0	100,0	

Consuming

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1	182	22,8	22,8	22,8
	2	195	24,4	24,4	47,2
	3	104	13,0	13,0	60,2
	4	179	22,4	22,4	82,6
	5	80	10,0	10,0	92,6
	6	41	5,1	5,1	97,7
	7	18	2,3	2,3	100,0
	Total	799	100,0	100,0	

Contributing

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1	622	77,8	77,8	77,8
	2	70	8,8	8,8	86,6
	3	39	4,9	4,9	91,5
	4	41	5,1	5,1	96,6
	5	16	2,0	2,0	98,6
	6	7	,9	,9	99,5
	7	4	,5	,5	100,0
	Total	799	100,0	100,0	

Creating

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1	631	79,0	79,0	79,0
	2	90	11,3	11,3	90,2
	3	24	3,0	3,0	93,2
	4	28	3,5	3,5	96,7
	5	17	2,1	2,1	98,9
	6	7	,9	,9	99,7
	7	2	,3	,3	100,0
	Total	799	100,0	100,0	

Control

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1	117	14,6	14,6	14,6
	2	78	9,8	9,8	24,4
	3	108	13,5	13,5	37,9
	4	178	22,3	22,3	60,2
	5	163	20,4	20,4	80,6
	6	95	11,9	11,9	92,5
	7	60	7,5	7,5	100,0
	Total	799	100,0	100,0	

Responsiveness

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1	63	7,9	7,9	7,9
	2	73	9,1	9,1	17,0
	3	122	15,3	15,3	32,3
	4	167	20,9	20,9	53,2
	5	150	18,8	18,8	72,0
	6	110	13,8	13,8	85,7
	7	114	14,3	14,3	100,0
	Total	799	100,0	100,0	

Personalization

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1	60	7,5	7,5	7,5
	2	70	8,8	8,8	16,3
	3	109	13,6	13,6	29,9
	4	188	23,5	23,5	53,4
	5	164	20,5	20,5	74,0
	6	144	18,0	18,0	92,0
	7	64	8,0	8,0	100,0
	Total	799	100,0	100,0	

Escapism

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1	293	36,7	36,7	36,7
	2	172	21,5	21,5	58,2
	3	106	13,3	13,3	71,5
	4	117	14,6	14,6	86,1
	5	53	6,6	6,6	92,7
	6	35	4,4	4,4	97,1
	7	23	2,9	2,9	100,0
	Total	799	100,0	100,0	

IntrinsicEnjoyment1

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1	81	10,1	10,1	10,1
	2	71	8,9	8,9	19,0
	3	69	8,6	8,6	27,7
	4	132	16,5	16,5	44,2
	5	152	19,0	19,0	63,2
	6	147	18,4	18,4	81,6
	7	147	18,4	18,4	100,0
	Total	799	100,0	100,0	

IntrinsicEnjoyment2

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1	123	15,4	15,4	15,4
	2	112	14,0	14,0	29,4
	3	123	15,4	15,4	44,8
	4	143	17,9	17,9	62,7
	5	134	16,8	16,8	79,5
	6	95	11,9	11,9	91,4
	7	69	8,6	8,6	100,0
	Total	799	100,0	100,0	

Satisfaction1

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	2	11	1,4	1,4	1,4
	3	24	3,0	3,0	4,4
	4	94	11,8	11,8	16,1
	5	217	27,2	27,2	43,3
	6	255	31,9	31,9	75,2
	7	198	24,8	24,8	100,0
	Total	799	100,0	100,0	

Satisfaction2

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	2	9	1,1	1,1	1,1
	3	19	2,4	2,4	3,5
	4	60	7,5	7,5	11,0
	5	182	22,8	22,8	33,8
	6	289	36,2	36,2	70,0
	7	240	30,0	30,0	100,0
	Total	799	100,0	100,0	

Interest1

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1	16	2,0	2,0	2,0
	2	43	5,4	5,4	7,4
	3	90	11,3	11,3	18,6
	4	137	17,1	17,1	35,8
	5	215	26,9	26,9	62,7
	6	164	20,5	20,5	83,2
	7	134	16,8	16,8	100,0
	Total	799	100,0	100,0	

Interest2

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1	11	1,4	1,4	1,4
	2	36	4,5	4,5	5,9
	3	75	9,4	9,4	15,3
	4	148	18,5	18,5	33,8
	5	195	24,4	24,4	58,2
	6	193	24,2	24,2	82,4
	7	141	17,6	17,6	100,0
	Total	799	100,0	100,0	

PersonalRelevance1

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1	53	6,6	6,6	6,6
	2	85	10,6	10,6	17,3
	3	117	14,6	14,6	31,9
	4	166	20,8	20,8	52,7
	5	156	19,5	19,5	72,2
	6	112	14,0	14,0	86,2
	7	110	13,8	13,8	100,0
	Total	799	100,0	100,0	

PersonalRelevance2

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1	113	14,1	14,1	14,1
	2	109	13,6	13,6	27,8
	3	118	14,8	14,8	42,6
	4	142	17,8	17,8	60,3
	5	144	18,0	18,0	78,3
	6	91	11,4	11,4	89,7
	7	82	10,3	10,3	100,0
	Total	799	100,0	100,0	

Reliability1

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1	3	,4	,4	,4
	2	10	1,3	1,3	1,6
	3	29	3,6	3,6	5,3
	4	74	9,3	9,3	14,5
	5	193	24,2	24,2	38,7
	6	274	34,3	34,3	73,0
	7	216	27,0	27,0	100,0
	Total	799	100,0	100,0	

Reliability2

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1	1	,1	,1	,1
	2	10	1,3	1,3	1,4
	3	26	3,3	3,3	4,6
	4	75	9,4	9,4	14,0
	5	164	20,5	20,5	34,5
	6	293	36,7	36,7	71,2
	7	230	28,8	28,8	100,0
	Total	799	100,0	100,0	

Reliability3

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1	10	1,3	1,3	1,3
	2	36	4,5	4,5	5,8
	3	80	10,0	10,0	15,8
	4	137	17,1	17,1	32,9
	5	213	26,7	26,7	59,6
	6	194	24,3	24,3	83,9
	7	129	16,1	16,1	100,0
	Total	799	100,0	100,0	

Intentions1

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1	4	,5	,5	,5
	2	26	3,3	3,3	3,8
	3	52	6,5	6,5	10,3
	4	143	17,9	17,9	28,2
	5	203	25,4	25,4	53,6
	6	234	29,3	29,3	82,9
	7	137	17,1	17,1	100,0
	Total	799	100,0	100,0	

Intentions2

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1	40	5,0	5,0	5,0
	2	71	8,9	8,9	13,9
	3	104	13,0	13,0	26,9
	4	163	20,4	20,4	47,3
	5	198	24,8	24,8	72,1
	6	143	17,9	17,9	90,0
	7	80	10,0	10,0	100,0
	Total	799	100,0	100,0	

Affective1

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	2	8	1,0	1,0	1,0
	3	22	2,8	2,8	3,8
	4	43	5,4	5,4	9,1
	5	117	14,6	14,6	23,8
	6	258	32,3	32,3	56,1
	7	351	43,9	43,9	100,0
	Total	799	100,0	100,0	

Affective2

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1	31	3,9	3,9	3,9
	2	48	6,0	6,0	9,9
	3	86	10,8	10,8	20,7
	4	151	18,9	18,9	39,5
	5	185	23,2	23,2	62,7
	6	159	19,9	19,9	82,6
	7	139	17,4	17,4	100,0
	Total	799	100,0	100,0	

Calculative1

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1	91	11,4	11,4	11,4
	2	104	13,0	13,0	24,4
	3	98	12,3	12,3	36,7
	4	133	16,6	16,6	53,3
	5	136	17,0	17,0	70,3
	6	117	14,6	14,6	85,0
	7	120	15,0	15,0	100,0
	Total	799	100,0	100,0	

Calculative2

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1	113	14,1	14,1	14,1
	2	104	13,0	13,0	27,2
	3	109	13,6	13,6	40,8
	4	124	15,5	15,5	56,3
	5	115	14,4	14,4	70,7
	6	119	14,9	14,9	85,6
	7	115	14,4	14,4	100,0
	Total	799	100,0	100,0	

Activity1

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1	22	2,8	2,8	2,8
	2	62	7,8	7,8	10,5
	3	80	10,0	10,0	20,5
	4	160	20,0	20,0	40,6
	5	180	22,5	22,5	63,1
	6	153	19,1	19,1	82,2
	7	142	17,8	17,8	100,0
	Total	799	100,0	100,0	

Activity2

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1	63	7,9	7,9	7,9
	2	104	13,0	13,0	20,9
	3	132	16,5	16,5	37,4
	4	167	20,9	20,9	58,3
	5	140	17,5	17,5	75,8
	6	108	13,5	13,5	89,4
	7	85	10,6	10,6	100,0
	Total	799	100,0	100,0	

Praise1

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1	22	2,8	2,8	2,8
	2	59	7,4	7,4	10,1
	3	94	11,8	11,8	21,9
	4	169	21,2	21,2	43,1
	5	203	25,4	25,4	68,5
	6	155	19,4	19,4	87,9
	7	97	12,1	12,1	100,0
	Total	799	100,0	100,0	

Praise2

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1	59	7,4	7,4	7,4
	2	79	9,9	9,9	17,3
	3	79	9,9	9,9	27,2
	4	152	19,0	19,0	46,2
	5	148	18,5	18,5	64,7
	6	142	17,8	17,8	82,5
	7	140	17,5	17,5	100,0
	Total	799	100,0	100,0	

Utility

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1	99	12,4	12,4	12,4
	2	91	11,4	11,4	23,8
	3	72	9,0	9,0	32,8
	4	118	14,8	14,8	47,6
	5	139	17,4	17,4	65,0
	6	134	16,8	16,8	81,7
	7	146	18,3	18,3	100,0
	Total	799	100,0	100,0	

Symbolic

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1	218	27,3	27,3	27,3
	2	111	13,9	13,9	41,2
	3	93	11,6	11,6	52,8
	4	113	14,1	14,1	67,0
	5	120	15,0	15,0	82,0
	6	88	11,0	11,0	93,0
	7	56	7,0	7,0	100,0
	Total	799	100,0	100,0	

Emotional

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1	79	9,9	9,9	9,9
	2	77	9,6	9,6	19,5
	3	61	7,6	7,6	27,2
	4	112	14,0	14,0	41,2
	5	128	16,0	16,0	57,2
	6	162	20,3	20,3	77,5
	7	180	22,5	22,5	100,0
	Total	799	100,0	100,0	

BrandReputation

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	3	8	1,0	1,0	1,0
	4	41	5,1	5,1	6,1
	5	145	18,1	18,1	24,3
	6	307	38,4	38,4	62,7
	7	298	37,3	37,3	100,0
	Total	799	100,0	100,0	

Knowledge

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1	1	,1	,1	,1
	2	5	,6	,6	,8
	3	37	4,6	4,6	5,4
	4	111	13,9	13,9	19,3
	5	286	35,8	35,8	55,1
	6	242	30,3	30,3	85,4
	7	117	14,6	14,6	100,0
	Total	799	100,0	100,0	

ComTrust

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1	21	2,6	2,6	2,6
	2	16	2,0	2,0	4,6
	3	45	5,6	5,6	10,3
	4	142	17,8	17,8	28,0
	5	229	28,7	28,7	56,7
	6	231	28,9	28,9	85,6
	7	115	14,4	14,4	100,0
	Total	799	100,0	100,0	

ComIden

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1	34	4,3	4,3	4,3
	2	16	2,0	2,0	6,3
	3	64	8,0	8,0	14,3
	4	187	23,4	23,4	37,7
	5	197	24,7	24,7	62,3
	6	190	23,8	23,8	86,1
	7	111	13,9	13,9	100,0
	Total	799	100,0	100,0	

Appendix C

→ Check for collinearity (variance inflation factor)

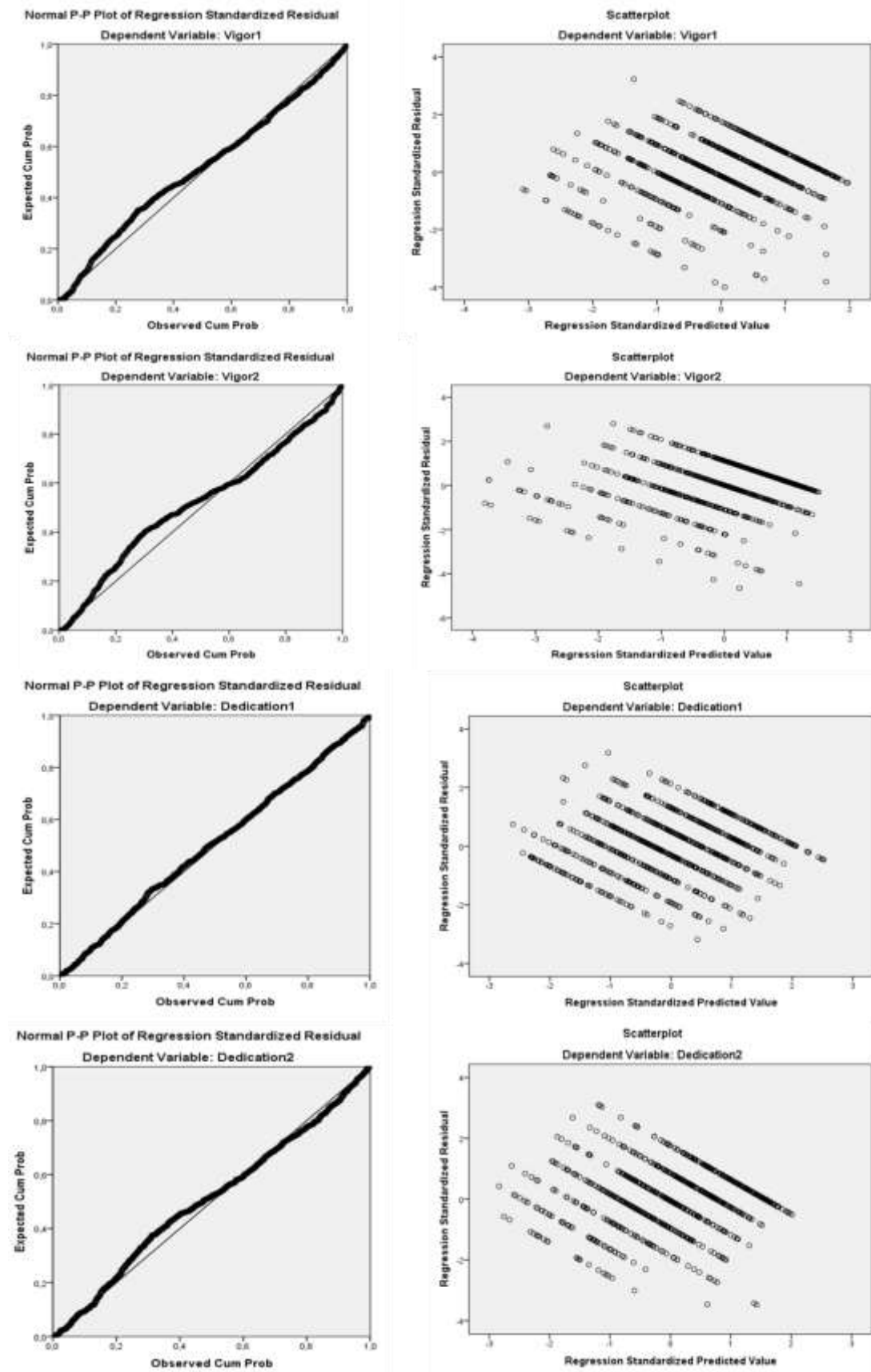
Model	Unstandardized Coefficients		Standardized Coefficients	T	Sig.	Collinearity Statistics	
	B	Std. Error	Beta			Tolerance	VIF
1 (Constant)	,138	,238		,579	,562		
Consuming	,038	,031	,039	1,227	,220	,569	1,757
Contributing	-,032	,054	-,023	-,582	,561	,384	2,605
Creating	,054	,059	,036	,926	,355	,394	2,538
Control	,036	,028	,042	1,305	,192	,574	1,741
Responsiveness	,024	,029	,028	,836	,403	,525	1,906
Personalization	-,042	,034	-,045	-1,233	,218	,446	2,243
Escapism	-,026	,030	-,028	-,878	,380	,564	1,774
IntrinsicEnjoyment1	,060	,028	,074	2,128	,034	,479	2,086
IntrinsicEnjoyment2	,019	,025	,023	,770	,442	,640	1,561
Satisfaction1	,208	,062	,155	3,381	,001	,278	3,594
Satisfaction2	,036	,071	,025	,507	,613	,235	4,258
Interest1	,169	,050	,166	3,341	,001	,238	4,207
Interest2	-,050	,043	-,047	-1,162	,246	,351	2,849
PersonalRelevance1	,272	,048	,309	5,637	,000	,195	5,139
PersonalRelevance2	-,118	,035	-,144	-3,378	,001	,323	3,099
Reliability1	-,078	,071	-,060	-1,094	,275	,197	5,073
Reliability2	-,065	,076	-,049	-,863	,389	,183	5,471
Reliability3	,190	,046	,178	4,164	,000	,322	3,106
Intentions1	,002	,052	,002	,038	,970	,295	3,394
Intentions2	-,066	,034	-,069	-1,924	,055	,452	2,214
Affective1	,172	,062	,123	2,799	,005	,304	3,291
Affective2	,121	,041	,127	2,980	,003	,321	3,120
Calculative1	-,062	,039	-,078	-1,583	,114	,239	4,177
Calculative2	,046	,036	,060	1,281	,201	,271	3,696
Activity1	,053	,036	,055	1,444	,149	,401	2,496
Activity2	,020	,037	,022	,539	,590	,340	2,941
Praise1	,030	,037	,030	,807	,420	,422	2,368
Praise2	-,005	,032	-,005	-,142	,887	,398	2,511

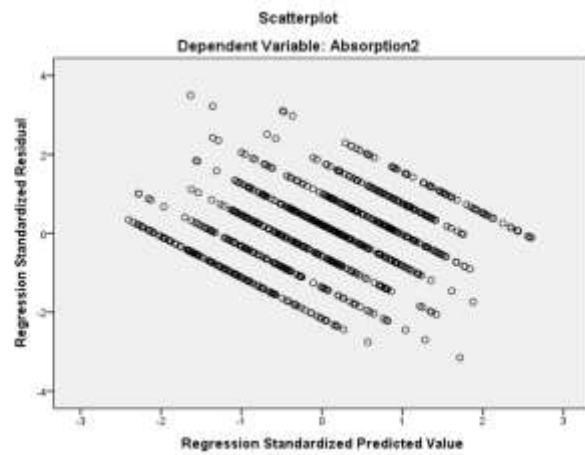
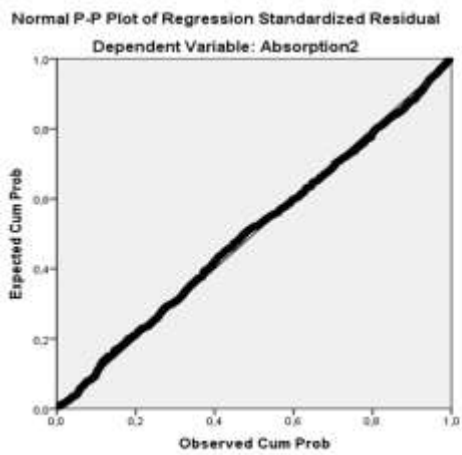
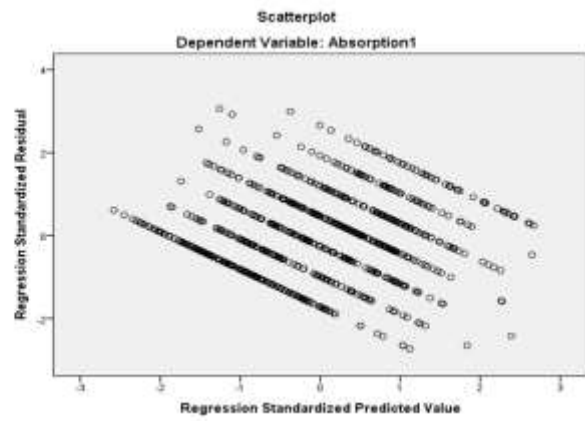
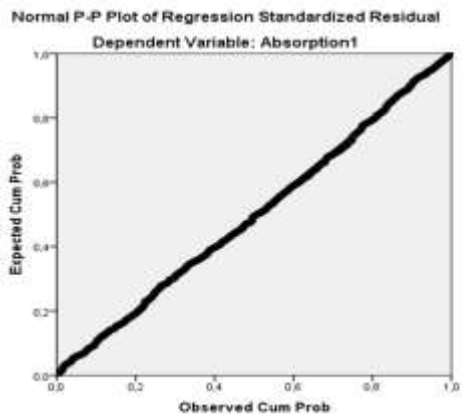
→ Check for outliers (squared Mahalanobis distance)

Observation number	Mahalanobis d-squared	p1	p2
399	143,682	0	0
428	126,033	0	0
772	112,484	0	0
60	108,282	0	0
65	108,107	0	0
330	105,334	0	0
562	103,686	0	0
206	102,457	0	0
371	102,311	0	0
274	100,01	0	0
185	92,815	0	0
110	92,719	0	0
279	91,202	0	0
23	89,714	0	0
313	87,3	0	0
353	86,95	0	0
125	83,536	0	0
865	83,188	0	0
174	82,948	0	0
515	81,316	0	0
349	80,687	0	0
528	79,934	0	0
309	79,667	0	0
310	79,476	0	0
196	78,86	0	0
300	74,953	0	0
195	74,921	0	0
641	74,89	0	0
482	74,789	0	0
718	74,283	0	0
276	74,217	0	0
301	73,597	0	0
254	73,41	0	0
150	72,936	0	0
11	72,799	0	0
275	72,631	0	0
135	72,499	0	0
635	72,263	0	0
211	72,006	0	0
132	71,998	0	0
587	71,299	0	0
354	71,077	0	0
99	70,889	0	0
187	70,861	0	0

285	70,66	0	0
627	70,593	0	0
577	70,571	0	0
6	70,358	0	0
457	69,776	0	0
108	69,324	0	0
575	69,275	0	0
586	69,188	0	0
374	69,123	0	0
293	69,099	0	0
157	68,973	0	0
201	68,77	0	0
153	68,622	0	0
433	68,363	0	0
12	68,145	0	0
458	68,107	0	0
70	68,032	0	0
395	68,023	0	0
586	67,903	0	0
728	67,816	0	0
729	67,816	0	0
294	67,48	0,001	0
140	66,609	0,001	0
12	66,112	0,001	0
512	66,088	0,001	0
403	66,015	0,001	0
159	65,358	0,001	0
162	65,332	0,001	0
666	65,284	0,001	0
226	65,085	0,001	0
315	64,518	0,001	0
216	64,374	0,001	0
293	63,984	0,001	0
475	62,825	0,002	0
286	62,631	0,002	0
822	62,607	0,002	0

→ Check for linearity and homoscedasticity





Appendix D

→ Convergent validity

Correlations – Latent variable: CBE

			Vigor1	Dedication1	Dedication2	Absorption1	Absorption2
Spearman's rho	Vigor1	Correlation Coefficient	1,000	,553**	,683**	,432**	,499**
		Sig. (2-tailed)		,000	,000	,000	,000
		N	799	799	799	799	799
	Dedication1	Correlation Coefficient	,553**	1,000	,610**	,641**	,794**
		Sig. (2-tailed)	,000		,000	,000	,000
		N	799	799	799	799	799
	Dedication2	Correlation Coefficient	,683**	,610**	1,000	,477**	,598**
		Sig. (2-tailed)	,000	,000		,000	,000
		N	799	799	799	799	799
	Absorption1	Correlation Coefficient	,432**	,641**	,477**	1,000	,755**
		Sig. (2-tailed)	,000	,000	,000		,000
		N	799	799	799	799	799
	Absorption2	Correlation Coefficient	,499**	,794**	,598**	,755**	1,000
		Sig. (2-tailed)	,000	,000	,000	,000	
		N	799	799	799	799	799

** . Correlation is significant at the 0.01 level (2-tailed).

Correlations – Latent variable: Customer Involvement

			Interest1	Interest2	PersonalRelevance1	PersonalRelevance2
Spearman's rho	Interest1	Correlation Coefficient	1,000	,745**	,808**	,702**
		Sig. (2-tailed)		,000	,000	,000
		N	799	799	799	799
	Interest2	Correlation Coefficient	,745**	1,000	,679**	,582**
		Sig. (2-tailed)	,000		,000	,000
		N	799	799	799	799
	PersonalRelevance1	Correlation Coefficient	,808**	,679**	1,000	,793**
		Sig. (2-tailed)	,000	,000		,000
		N	799	799	799	799
	PersonalRelevance2	Correlation Coefficient	,702**	,582**	,793**	1,000
		Sig. (2-tailed)	,000	,000	,000	
		N	799	799	799	799

** . Correlation is significant at the 0.01 level (2-tailed).

Correlations - Latent variable: Customer Participation

			Contributing	Creating
Spearman's rho	Contributing	Correlation Coefficient	1,000	,610**
		Sig. (2-tailed)		,000
		N	799	799
	Creating	Correlation Coefficient	,610**	1,000
		Sig. (2-tailed)	,000	
		N	799	799

** . Correlation is significant at the 0.01 level (2-tailed).

Correlations - Latent variable: Customer Interactivity

			Control	Responsiveness	Personalization
Spearman's rho	Control	Correlation Coefficient	1,000	,666**	,604**
		Sig. (2-tailed)		,000	,000
		N	799	799	799
	Responsiveness	Correlation Coefficient	,666**	1,000	,634**
		Sig. (2-tailed)	,000		,000
		N	799	799	799
	Personalization	Correlation Coefficient	,604**	,634**	1,000
		Sig. (2-tailed)	,000	,000	
		N	799	799	799

** . Correlation is significant at the 0.01 level (2-tailed).

Correlations - Latent variable: Customer Flow Experience

			Escapism	IntrinsicEnjoyment1	IntrinsicEnjoyment2
Spearman's rho	Escapism	Correlation Coefficient	1,000	,655**	,593**
		Sig. (2-tailed)		,000	,000
		N	799	799	799
	IntrinsicEnjoyment1	Correlation Coefficient	,655**	1,000	,699**
		Sig. (2-tailed)	,000		,000
		N	799	799	799
	IntrinsicEnjoyment2	Correlation Coefficient	,593**	,699**	1,000
		Sig. (2-tailed)	,000	,000	
		N	799	799	799

** . Correlation is significant at the 0.01 level (2-tailed).

Correlations - Latent variable: Customer WOM referrals

			Activity1	Activity2	Praise1	Praise2
Spearman's rho	Activity1	Correlation Coefficient	1,000	,678**	,541**	,608**
		Sig. (2-tailed)		,000	,000	,000
		N	799	799	799	799
	Activity2	Correlation Coefficient	,678**	1,000	,531**	,673**
		Sig. (2-tailed)	,000		,000	,000
		N	799	799	799	799
	Praise1	Correlation Coefficient	,541**	,531**	1,000	,548**
		Sig. (2-tailed)	,000	,000		,000
		N	799	799	799	799
	Praise2	Correlation Coefficient	,608**	,673**	,548**	1,000
		Sig. (2-tailed)	,000	,000	,000	
		N	799	799	799	799

** . Correlation is significant at the 0.01 level (2-tailed).

Correlations - Latent variable: Customer Cumulative Satisfaction

			Satisfaction1	Satisfaction2
Spearman's rho	Satisfaction1	Correlation Coefficient	1,000	,799**
		Sig. (2-tailed)		,000
		N	799	799
	Satisfaction2	Correlation Coefficient	,799**	1,000
		Sig. (2-tailed)	,000	
		N	799	799

** . Correlation is significant at the 0.01 level (2-tailed).

Correlations - Latent variable: Customer Trust

			Reliability1	Reliability2	Reliability3	Intentions1	Intentions2
Spearman's rho	Reliability1	Correlation Coefficient	1,000	,843**	,707**	,671**	,516**
		Sig. (2-tailed)		,000	,000	,000	,000
		N	799	799	799	799	799
	Reliability2	Correlation Coefficient	,843**	1,000	,746**	,700**	,539**
		Sig. (2-tailed)	,000		,000	,000	,000
		N	799	799	799	799	799
	Reliability3	Correlation Coefficient	,707**	,746**	1,000	,721**	,573**
		Sig. (2-tailed)	,000	,000		,000	,000
		N	799	799	799	799	799
	Intentions1	Correlation Coefficient	,671**	,700**	,721**	1,000	,677**
		Sig. (2-tailed)	,000	,000	,000		,000
		N	799	799	799	799	799
	Intentions2	Correlation Coefficient	,516**	,539**	,573**	,677**	1,000
		Sig. (2-tailed)	,000	,000	,000	,000	
		N	799	799	799	799	799

** . Correlation is significant at the 0.01 level (2-tailed).

Correlations - Latent variable: Customer Commitment

			Affective2	Calculative1	Calculative2
Spearman's rho	Affective2	Correlation Coefficient	1,000	,676**	,633**
		Sig. (2-tailed)		,000	,000
		N	799	799	799
	Calculative1	Correlation Coefficient	,676**	1,000	,831**
		Sig. (2-tailed)	,000		,000
		N	799	799	799
	Calculative2	Correlation Coefficient	,633**	,831**	1,000
		Sig. (2-tailed)	,000	,000	
		N	799	799	799

** . Correlation is significant at the 0.01 level (2-tailed).

→ Discriminant validity

Correlations				r^2
CI	<-->	CP	0,303	0,092
CI	<-->	CInt	0,442	0,195
CI	<-->	CFE	0,499	0,249
CI	<-->	CCS	0,662	0,438
CI	<-->	CWom	0,735	0,540
CI	<-->	CT	0,712	0,507
CI	<-->	CC	0,772	0,596
CI	<-->	CBE	0,656	0,430
CP	<-->	CInt	0,318	0,101
CP	<-->	CFE	0,398	0,158
CP	<-->	CCS	0,145	0,021
CP	<-->	CWom	0,362	0,131
CP	<-->	CT	0,149	0,022
CP	<-->	CC	0,293	0,086
CP	<-->	CBE	0,368	0,135
CInt	<-->	CFE	0,702	0,493
CInt	<-->	CCS	0,451	0,203
CInt	<-->	CWom	0,536	0,287
CInt	<-->	CT	0,518	0,268
CInt	<-->	CC	0,419	0,176
CInt	<-->	CBE	0,578	0,334
CFE	<-->	CCS	0,405	0,164
CFE	<-->	CWom	0,561	0,315
CFE	<-->	CT	0,413	0,171
CFE	<-->	CC	0,456	0,208
CFE	<-->	CBE	0,703	0,494
CCS	<-->	CWom	0,723	0,523
CCS	<-->	CT	0,796	0,634
CCS	<-->	CC	0,614	0,377
CCS	<-->	CBE	0,536	0,287
CWom	<-->	CT	0,758	0,575
CWom	<-->	CC	0,729	0,531
CWom	<-->	CBE	0,695	0,483
CT	<-->	CC	0,669	0,448
CT	<-->	CBE	0,548	0,300
CC	<-->	CBE	0,588	0,346

Appendix E

CMIN

Model	NPAR	CMIN	DF	P	CMIN/DF
Default model	133	1142,836	332	,000	3,442
Saturated model	465	,000	0		
Independence model	30	19330,905	435	,000	44,439

RMR, GFI

Model	RMR	GFI	AGFI	PGFI
Default model	,127	,911	,876	,651
Saturated model	,000	1,000		
Independence model	1,127	,146	,087	,137

Baseline Comparisons

Model	NFI Delta1	RFI rho1	IFI Delta2	TLI rho2	CFI
Default model	,941	,923	,957	,944	,957
Saturated model	1,000		1,000		1,000
Independence model	,000	,000	,000	,000	,000

Parsimony-Adjusted Measures

Model	PRATIO	PNFI	PCFI
Default model	,763	,718	,730
Saturated model	,000	,000	,000
Independence model	1,000	,000	,000

NCP

Model	NCP	LO 90	HI 90
Default model	810,836	711,770	917,478
Saturated model	,000	,000	,000
Independence model	18895,905	18444,267	19353,867

FMIN

Model	FMIN	F0	LO 90	HI 90
Default model	1,432	1,016	,892	1,150
Saturated model	,000	,000	,000	,000
Independence model	24,224	23,679	23,113	24,253

RMSEA

Model	RMSEA	LO 90	HI 90	PCLOSE
Default model	,055	,052	,059	,06
Independence model	,233	,231	,236	,000

AIC

Model	AIC	BCC	BIC	CAIC
Default model	1408,836	1419,587	2031,723	2164,723
Saturated model	930,000	967,588	3107,763	3572,763
Independence model	19390,905	19393,330	19531,405	19561,405

ECVI

Model	ECVI	LO 90	HI 90	MECVI
Default model	1,765	1,641	1,899	1,779
Saturated model	1,165	1,165	1,165	1,213
Independence model	24,299	23,733	24,873	24,302

HOELTER

Model	HOELTER .05	HOELTER .01
Default model	263	276
Independence model	21	21

Appendix F

CMIN

Model	NPAR	CMIN	DF	P	CMIN/DF
Default model	123	1388,903	373	,000	3,724
Saturated model	496	,000	0		
Independence model	31	19968,558	465	,000	42,943

RMR, GFI

Model	RMR	GFI	AGFI	PGFI
Default model	,421	,900	,867	,677
Saturated model	,000	1,000		
Independence model	1,125	,142	,085	,133

Baseline Comparisons

Model	NFI Delta1	RFI rho1	IFI Delta2	TLI rho2	CFI
Default model	,930	,913	,948	,935	,948
Saturated model	1,000		1,000		1,000
Independence model	,000	,000	,000	,000	,000

Parsimony-Adjusted Measures

Model	PRATIO	PNFI	PCFI
Default model	,802	,746	,760
Saturated model	,000	,000	,000
Independence model	1,000	,000	,000

NCP

Model	NCP	LO 90	HI 90
Default model	1015,903	905,568	1133,788
Saturated model	,000	,000	,000
Independence model	19503,558	19044,573	19968,871

FMIN

Model	FMIN	F0	LO 90	HI 90
Default model	1,740	1,273	1,135	1,421
Saturated model	,000	,000	,000	,000
Independence model	25,023	24,441	23,865	25,024

RMSEA

Model	RMSEA	LO 90	HI 90	PCLOSE
Default model	,058	,055	,062	,109
Independence model	,229	,227	,232	,000

AIC

Model	AIC	BCC	BIC	CAIC
Default model	1634,903	1645,179	2210,956	2333,956
Saturated model	992,000	1033,441	3314,947	3810,947
Independence model	20030,558	20033,149	20175,743	20206,743

ECVI

Model	ECVI	LO 90	HI 90	MECVI
Default model	2,049	1,910	2,196	2,062
Saturated model	1,243	1,243	1,243	1,295
Independence model	25,101	24,526	25,684	25,104

HOELTER

Model	HOELTER .05	HOELTER .01
Default model	241	253
Independence model	21	22

Appendix G

CMIN

Model	NPAR	CMIN	DF	P	CMIN/DF
Default model	133	1141,069	363	,000	3,143
Saturated model	496	,000	0		
Independence model	31	19968,558	465	,000	42,943

RMR, GFI

Model	RMR	GFI	AGFI	PGFI
Default model	,135	,916	,885	,670
Saturated model	,000	1,000		
Independence model	1,125	,142	,085	,133

Baseline Comparisons

Model	NFI Delta1	RFI rho1	IFI Delta2	TLI rho2	CFI
Default model	,943	,927	,960	,949	,960
Saturated model	1,000		1,000		1,000
Independence model	,000	,000	,000	,000	,000

Parsimony-Adjusted Measures

Model	PRATIO	PNFI	PCFI
Default model	,781	,736	,750
Saturated model	,000	,000	,000
Independence model	1,000	,000	,000

NCP

Model	NCP	LO 90	HI 90
Default model	778,069	679,927	883,809
Saturated model	,000	,000	,000
Independence model	19503,558	19044,573	19968,871

FMIN

Model	FMIN	F0	LO 90	HI 90
Default model	1,430	,975	,852	1,108
Saturated model	,000	,000	,000	,000
Independence model	25,023	24,441	23,865	25,024

RMSEA

Model	RMSEA	LO 90	HI 90	PCLOSE
Default model	,052	,048	,055	,185
Independence model	,229	,227	,232	,000

AIC

Model	AIC	BCC	BIC	CAIC
Default model	1407,069	1418,181	2029,956	2162,956
Saturated model	992,000	1033,441	3314,947	3810,947
Independence model	20030,558	20033,149	20175,743	20206,743

ECVI

Model	ECVI	LO 90	HI 90	MECVI
Default model	1,763	1,640	1,896	1,777
Saturated model	1,243	1,243	1,243	1,295
Independence model	25,101	24,526	25,684	25,104

HOELTER

Model	HOELTER .05	HOELTER .01
Default model	286	300
Independence model	21	22

Regression Weights: (Group number 1 - Default model)

			Estimate	S.E.	C.R.	P	Label
CP	<---	CI	,204	,026	7,721	***	
CIInt	<---	CP	,214	,049	4,337	***	
CFE	<---	CIInt	,666	,056	11,911	***	
CBE	<---	CI	,615	,031	19,785	***	
CBE	<---	CFE	,273	,065	4,232	***	
CBE	<---	CIInt	,165	,050	3,321	***	
CBE	<---	CP	-,040	,029	-1,392	,164	
CCS	<---	CBE	1,068	,211	5,070	***	
CCS	<---	CI	-,270	,130	-2,072	,058	
CCS	<---	CP	,033	,020	1,622	,105	
CCS	<---	CIInt	-,137	,055	-2,496	,063	
CCS	<---	CFE	-,029	,059	-,500	,617	
CT	<---	CBE	1,350	,340	3,966	***	
CT	<---	CCS	-1,018	,509	-1,998	,066	
CC	<---	CBE	1,319	,095	13,848	***	
CC	<---	CCS	-,647	,178	-3,628	,062	
CC	<---	CT	,487	,160	3,039	,072	
CWom	<---	CBE	,429	,124	3,470	***	
CWom	<---	CC	,382	,088	4,322	***	
CWom	<---	CCS	-,078	,144	-,543	,587	
CWom	<---	CT	,219	,132	1,664	,096	

Appendix H

CMIN

Model	NPAR	CMIN	DF	P	CMIN/DF
Default model	124	1205,706	404	,000	2,984
Saturated model	528	,000	0		
Independence model	32	19434,448	496	,000	39,182

RMR, GFI

Model	RMR	GFI	AGFI	PGFI
Default model	,135	,912	,885	,698
Saturated model	,000	1,000		
Independence model	,861	,196	,144	,184

Baseline Comparisons

Model	NFI Delta1	RFI rho1	IFI Delta2	TLI rho2	CFI
Default model	,938	,924	,958	,948	,958
Saturated model	1,000		1,000		1,000
Independence model	,000	,000	,000	,000	,000

Parsimony-Adjusted Measures

Model	PRATIO	PNFI	PCFI
Default model	,815	,764	,780
Saturated model	,000	,000	,000
Independence model	1,000	,000	,000

NCP

Model	NCP	LO 90	HI 90
Default model	801,706	701,253	909,768
Saturated model	,000	,000	,000
Independence model	18938,448	18485,946	19397,282

FMIN

Model	FMIN	F0	LO 90	HI 90
Default model	1,511	1,005	,879	1,140
Saturated model	,000	,000	,000	,000
Independence model	24,354	23,732	23,165	24,307

RMSEA

Model	RMSEA	LO 90	HI 90	PCLOSE
Default model	,050	,047	,053	,521
Independence model	,219	,216	,221	,000

AIC

Model	AIC	BCC	BIC	CAIC
Default model	1453,706	1464,404	2034,442	2158,442
Saturated model	1056,000	1101,553	3528,815	4056,815
Independence model	19498,448	19501,209	19648,315	19680,315

ECVI

Model	ECVI	LO 90	HI 90	MECVI
Default model	1,822	1,696	1,957	1,835
Saturated model	1,323	1,323	1,323	1,380
Independence model	24,434	23,867	25,009	24,438

HOELTER

Model	HOELTER .05	HOELTER .01
Default model	300	314
Independence model	23	24

Appendix I

CMIN

Model	NPAR	CMIN	DF	P	CMIN/DF
Default model	124	1044,865	404	,000	2,586
Saturated model	528	,000	0		
Independence model	32	18965,587	496	,000	38,237

RMR, GFI

Model	RMR	GFI	AGFI	PGFI
Default model	,165	,924	,901	,707
Saturated model	,000	1,000		
Independence model	,921	,200	,148	,188

Baseline Comparisons

Model	NFI Delta1	RFI rho1	IFI Delta2	TLI rho2	CFI
Default model	,945	,932	,965	,957	,965
Saturated model	1,000		1,000		1,000
Independence model	,000	,000	,000	,000	,000

Parsimony-Adjusted Measures

Model	PRATIO	PNFI	PCFI
Default model	,815	,770	,786
Saturated model	,000	,000	,000
Independence model	1,000	,000	,000

NCP

Model	NCP	LO 90	HI 90
Default model	640,865	549,153	740,237
Saturated model	,000	,000	,000
Independence model	18469,587	18022,688	18922,820

FMIN

Model	FMIN	F0	LO 90	HI 90
Default model	1,309	,803	,688	,928
Saturated model	,000	,000	,000	,000
Independence model	23,766	23,145	22,585	23,713

RMSEA

Model	RMSEA	LO 90	HI 90	PCLOSE
Default model	,045	,041	,048	,996
Independence model	,216	,213	,219	,000

AIC

Model	AIC	BCC	BIC	CAIC
Default model	1292,865	1303,563	1873,602	1997,602
Saturated model	1056,000	1101,553	3528,815	4056,815
Independence model	19029,587	19032,348	19179,455	19211,455

ECVI

Model	ECVI	LO 90	HI 90	MECVI
Default model	1,620	1,505	1,745	1,634
Saturated model	1,323	1,323	1,323	1,380
Independence model	23,847	23,287	24,415	23,850

HOELTER

Model	HOELTER .05	HOELTER .01
Default model	346	362
Independence model	24	25

Appendix J

CMIN

Model	NPAR	CMIN	DF	P	CMIN/DF
Default model	100	1276,449	428	,000	2,982
Saturated model	528	,000	0		
Independence model	32	19508,347	496	,000	39,331

RMR, GFI

Model	RMR	GFI	AGFI	PGFI
Default model	,229	,910	,889	,738
Saturated model	,000	1,000		
Independence model	1,333	,200	,149	,188

Baseline Comparisons

Model	NFI Delta1	RFI rho1	IFI Delta2	TLI rho2	CFI
Default model	,935	,924	,956	,948	,955
Saturated model	1,000		1,000		1,000
Independence model	,000	,000	,000	,000	,000

Parsimony-Adjusted Measures

Model	PRATIO	PNFI	PCFI
Default model	,863	,806	,824
Saturated model	,000	,000	,000
Independence model	1,000	,000	,000

NCP

Model	NCP	LO 90	HI 90
Default model	848,449	744,991	959,517
Saturated model	,000	,000	,000
Independence model	19012,347	18558,968	19472,058

FMIN

Model	FMIN	F0	LO 90	HI 90
Default model	1,600	1,063	,934	1,202
Saturated model	,000	,000	,000	,000
Independence model	24,447	23,825	23,257	24,401

RMSEA

Model	RMSEA	LO 90	HI 90	PCLOSE
Default model	,050	,047	,053	,527
Independence model	,219	,217	,222	,000

AIC

Model	AIC	BCC	BIC	CAIC
Default model	1476,449	1485,076	1944,785	2044,785
Saturated model	1056,000	1101,553	3528,815	4056,815
Independence model	19572,347	19575,108	19722,215	19754,215

ECVI

Model	ECVI	LO 90	HI 90	MECVI
Default model	1,850	1,721	1,989	1,861
Saturated model	1,323	1,323	1,323	1,380
Independence model	24,527	23,959	25,103	24,530

HOELTER

Model	HOELTER .05	HOELTER .01
Default model	299	312
Independence model	23	24

Appendix K

CMIN

Model	NPAR	CMIN	DF	P	CMIN/DF
Default model	99	1285,275	429	,000	2,996
Saturated model	528	,000	0		
Independence model	32	19538,135	496	,000	39,391

RMR, GFI

Model	RMR	GFI	AGFI	PGFI
Default model	,223	,908	,887	,738
Saturated model	,000	1,000		
Independence model	1,194	,201	,150	,189

Baseline Comparisons

Model	NFI Delta1	RFI rho1	IFI Delta2	TLI rho2	CFI
Default model	,934	,924	,955	,948	,955
Saturated model	1,000		1,000		1,000
Independence model	,000	,000	,000	,000	,000

Parsimony-Adjusted Measures

Model	PRATIO	PNFI	PCFI
Default model	,865	,808	,826
Saturated model	,000	,000	,000
Independence model	1,000	,000	,000

NCP

Model	NCP	LO 90	HI 90
Default model	856,275	752,396	967,763
Saturated model	,000	,000	,000
Independence model	19042,135	18588,403	19502,198

FMIN

Model	FMIN	F0	LO 90	HI 90
Default model	1,611	1,073	,943	1,213
Saturated model	,000	,000	,000	,000
Independence model	24,484	23,862	23,294	24,439

RMSEA

Model	RMSEA	LO 90	HI 90	PCLOSE
Default model	,050	,047	,053	,492
Independence model	,219	,217	,222	,000

AIC

Model	AIC	BCC	BIC	CAIC
Default model	1483,275	1491,817	1946,928	2045,928
Saturated model	1056,000	1101,553	3528,815	4056,815
Independence model	19602,135	19604,896	19752,002	19784,002

ECVI

Model	ECVI	LO 90	HI 90	MECVI
Default model	1,859	1,729	1,998	1,869
Saturated model	1,323	1,323	1,323	1,380
Independence model	24,564	23,995	25,141	24,568

HOELTER

Model	HOELTER .05	HOELTER .01
Default model	297	311
Independence model	23	24

Appendix L

Assuming model Unconstrained to be correct:

Model	DF	CMIN	P	NFI Delta-1	IFI Delta-2	RFI rho-1	TLI rho2
Measurement weights	22	30,515	,106	,001	,002	-,001	-,001
Structural weights	33	56,779	,006	,003	,003	-,001	-,001
Structural residuals	51	90,473	,001	,004	,005	-,001	-,001
Measurement residuals	122	249,491	,000	,012	,013	-,001	-,001

Assuming model Measurement weights to be correct:

Model	DF	CMIN	P	NFI Delta-1	IFI Delta-2	RFI rho-1	TLI rho2
Structural weights	11	26,264	,006	,001	,001	,000	,000
Structural residuals	29	59,957	,001	,003	,003	,000	,000
Measurement residuals	100	218,975	,000	,011	,011	,000	,000

Assuming model Structural weights to be correct:

Model	DF	CMIN	P	NFI Delta-1	IFI Delta-2	RFI rho-1	TLI rho2
Structural residuals	18	33,694	,014	,002	,002	,000	,000
Measurement residuals	89	192,712	,000	,009	,010	,000	,000

Assuming model Structural residuals to be correct:

Model	DF	CMIN	P	NFI Delta-1	IFI Delta-2	RFI rho-1	TLI rho2
Measurement residuals	71	159,018	,000	,008	,008	,000	,000

Appendix M

Correlation Matrix^a

		Utility	Symbolic	Emotional
Correlation	Utility	1,000	,128	-,036
	Symbolic	,128	1,000	,536
	Emotional	-,036	,536	1,000
Sig. (1-tailed)	Utility		,000	,153
	Symbolic	,000		,000
	Emotional	,153	,000	

KMO and Bartlett's Test

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		,570
Bartlett's Test of Sphericity		Approx. Chi-Square
		189,730
Df		3
Sig.		,000

Communalities

	Initial	Extraction
Utility	1,000	,968
Symbolic	1,000	,740
Emotional	1,000	,758

Extraction Method: Principal Component Analysis.

Total Variance Explained

Component	Initial Eigenvalues			Extraction Sums of Squared Loadings			Rotation Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	1,446	48,197	48,197	1,446	48,197	48,197	1,435	47,835	47,835
2	1,020	33,987	82,184	1,020	33,987	82,184	1,030	34,349	82,184
3	,534	17,816	100,000						

Extraction Method: Principal Component Analysis.

Rotated Component Matrix^a

	Component	
	1	2
Utility	,023	,984
Symbolic	,835	,204
Emotional	,858	-,147

Extraction Method: Principal Component Analysis.

Rotation Method: Varimax with Kaiser Normalization.

a. Rotation converged in 3 iterations.

Appendix N

Agglomeration Schedule

Stage	Cluster Combined		Coefficients	Stage Cluster First Appears		Next Stage
	Cluster 1	Cluster 2		Cluster 1	Cluster 2	
1	695	799	0,000	0	0	94
2	322	798	0,000	0	0	624
3	774	797	0,000	0	0	25
4	410	796	0,000	0	0	333
5	600	795	0,000	0	0	177
6	645	794	0,000	0	0	138
7	635	793	0,000	0	0	145
8	482	791	0,000	0	0	279
9	715	790	0,000	0	0	76
10	788	789	0,000	0	0	11
11	34	788	0,000	0	10	29
12	747	787	0,000	0	0	584
13	62	786	0,000	0	0	673
14	770	785	0,000	0	0	29
15	734	784	0,000	0	0	639
16	549	783	0,000	0	0	641
17	759	782	0,000	0	0	39
18	513	781	0,000	0	0	636
19	766	780	0,000	0	0	33
20	718	779	0,000	0	0	73
21	632	778	0,000	0	0	147
22	560	777	0,000	0	0	213
23	564	776	0,000	0	0	209
24	704	775	0,000	0	0	85
25	399	774	0,000	0	3	248
26	414	773	0,000	0	0	329
27	595	772	0,000	0	0	181
28	628	771	0,000	0	0	151
29	34	770	0,000	11	14	168
30	610	769	0,000	0	0	168
31	317	768	0,000	0	0	406
32	469	767	0,000	0	0	287
33	171	766	0,000	0	19	206
34	758	765	0,000	0	0	40
35	732	764	0,000	0	0	60
36	640	762	0,000	0	0	142
37	33	761	0,000	0	0	651
38	473	760	0,000	0	0	650
39	208	759	0,000	0	17	90
40	114	758	0,000	0	34	274

41	538	757	0,000	0	0	229
42	719	756	0,000	0	0	72
43	633	755	0,000	0	0	589
44	578	754	0,000	0	0	197
45	568	753	0,000	0	0	206
46	744	752	0,000	0	0	52
47	406	751	0,000	0	0	337
48	594	750	0,000	0	0	182
49	664	749	0,000	0	0	122
50	690	748	0,000	0	0	99
51	494	745	0,000	0	0	268
52	650	744	0,000	0	46	570
53	533	743	0,000	0	0	234
54	671	742	0,000	0	0	116
55	722	741	0,000	0	0	69
56	713	739	0,000	0	0	634
57	737	738	0,000	0	0	58
58	490	737	0,000	0	57	264
59	328	735	0,000	0	0	397
60	35	732	0,000	0	35	119
61	708	731	0,000	0	0	82
62	702	730	0,000	0	0	87
63	604	729	0,000	0	0	174
64	589	728	0,000	0	0	187
65	562	727	0,000	0	0	211
66	385	726	0,000	0	0	352
67	386	725	0,000	0	0	663
68	711	724	0,000	0	0	79
69	128	722	0,000	0	55	496
70	648	721	0,000	0	0	135
71	682	720	0,000	0	0	107
72	92	719	0,000	0	42	210
73	145	718	0,000	0	20	476
74	468	717	0,000	0	0	635
75	593	716	0,000	0	0	183
76	99	715	0,000	0	9	127
77	703	714	0,000	0	0	86
78	516	712	0,000	0	0	248
79	36	711	0,000	0	68	222
80	603	710	0,000	0	0	616
81	555	709	0,000	0	0	218
82	156	708	0,000	0	61	372
83	586	707	0,000	0	0	190
84	459	706	0,000	0	0	294

85	64	704	0,000	0	24	196
86	191	703	0,000	0	77	646
87	3	702	0,000	0	62	398
88	602	701	0,000	0	0	175
89	699	700	0,000	0	0	90
90	208	699	0,000	39	89	300
91	673	698	0,000	0	0	114
92	625	697	0,000	0	0	154
93	654	696	0,000	0	0	131
94	11	695	0,000	0	1	178
95	452	694	0,000	0	0	300
96	498	693	0,000	0	0	264
97	653	692	0,000	0	0	611
98	487	691	0,000	0	0	274
99	299	690	0,000	0	50	117
100	599	689	0,000	0	0	580
101	46	688	0,000	0	0	694
102	342	687	0,000	0	0	590
103	670	686	0,000	0	0	117
104	563	685	0,000	0	0	210
105	435	684	0,000	0	0	316
106	398	683	0,000	0	0	344
107	2	682	0,000	0	71	204
108	304	681	0,000	0	0	659
109	647	680	0,000	0	0	136
110	550	679	0,000	0	0	222
111	503	677	0,000	0	0	259
112	544	676	0,000	0	0	225
113	668	675	0,000	0	0	119
114	69	673	0,000	0	91	140
115	657	672	0,000	0	0	129
116	117	671	0,000	0	54	582
117	299	670	0,000	99	103	338
118	471	669	0,000	0	0	286
119	35	668	0,000	60	113	215
120	642	666	0,000	0	0	140
121	598	665	0,000	0	0	178
122	281	664	0,000	0	49	347
123	662	663	0,000	0	0	124
124	196	662	0,000	0	123	384
125	497	661	0,000	0	0	265
126	587	660	0,000	0	0	189
127	99	659	0,000	76	0	626
128	551	658	0,000	0	0	221

129	186	657	0,000	0	115	386
130	613	655	0,000	0	0	165
131	67	654	0,000	0	93	236
132	510	652	0,000	0	0	647
133	111	651	0,000	0	0	581
134	576	649	0,000	0	0	199
135	6	648	0,000	0	70	217
136	91	647	0,000	0	109	456
137	430	646	0,000	0	0	319
138	309	645	0,000	0	6	400
139	570	643	0,000	0	0	204
140	69	642	0,000	114	120	483
141	239	641	0,000	0	0	565
142	60	640	0,000	0	36	412
143	312	639	0,000	0	0	660
144	23	637	0,000	0	0	700
145	472	635	0,000	0	7	219
146	42	634	0,000	0	0	580
147	84	632	0,000	0	21	367
148	579	631	0,000	0	0	196
149	315	630	0,000	0	0	583
150	433	629	0,000	0	0	317
151	279	628	0,000	0	28	422
152	115	627	0,000	0	0	533
153	554	626	0,000	0	0	219
154	426	625	0,000	0	92	666
155	542	624	0,000	0	0	629
156	456	623	0,000	0	0	297
157	476	622	0,000	0	0	283
158	337	621	0,000	0	0	389
159	582	620	0,000	0	0	193
160	611	619	0,000	0	0	167
161	325	618	0,000	0	0	400
162	521	617	0,000	0	0	243
163	428	616	0,000	0	0	321
164	559	614	0,000	0	0	214
165	63	613	0,000	0	130	396
166	453	612	0,000	0	0	299
167	106	611	0,000	0	160	208
168	34	610	0,000	29	30	227
169	597	609	0,000	0	0	179
170	547	608	0,000	0	0	223
171	384	607	0,000	0	0	353
172	584	606	0,000	0	0	192

173	240	605	0,000	0	0	459
174	184	604	0,000	0	63	380
175	455	602	0,000	0	88	293
176	478	601	0,000	0	0	582
177	21	600	0,000	0	5	572
178	11	598	0,000	94	121	373
179	53	597	0,000	0	169	499
180	552	596	0,000	0	0	220
181	58	595	0,000	0	27	471
182	16	594	0,000	0	48	594
183	355	593	0,000	0	75	272
184	565	592	0,000	0	0	208
185	160	591	0,000	0	0	508
186	266	590	0,000	0	0	689
187	55	589	0,000	0	64	290
188	421	588	0,000	0	0	652
189	392	587	0,000	0	126	655
190	40	586	0,000	0	83	246
191	440	585	0,000	0	0	311
192	129	584	0,000	0	172	409
193	389	582	0,000	0	159	621
194	303	581	0,000	0	0	412
195	345	580	0,000	0	0	384
196	64	579	0,000	85	148	240
197	8	578	0,000	0	44	374
198	193	577	0,000	0	0	633
199	197	576	0,000	0	134	212
200	358	575	0,000	0	0	374
201	541	574	0,000	0	0	227
202	558	573	0,000	0	0	215
203	506	571	0,000	0	0	256
204	2	570	0,000	107	139	332
205	441	569	0,000	0	0	310
206	171	568	0,000	33	45	415
207	150	567	0,000	0	0	618
208	106	565	0,000	167	184	402
209	526	564	0,000	0	23	654
210	92	563	0,000	72	104	233
211	172	562	0,000	0	65	431
212	197	561	0,000	199	0	715
213	54	560	0,000	0	22	336
214	51	559	0,000	0	164	407
215	35	558	0,000	119	202	361
216	534	557	0,000	0	0	233

217	6	556	0,000	135	0	653
218	418	555	0,000	0	81	679
219	472	554	0,000	145	153	651
220	52	552	0,000	0	180	460
221	28	551	0,000	0	128	437
222	36	550	0,000	79	110	244
223	177	547	0,000	0	170	681
224	507	546	0,000	0	0	255
225	295	544	0,000	0	112	296
226	525	543	0,000	0	0	240
227	34	541	0,000	168	201	238
228	401	540	0,000	0	0	342
229	210	538	0,000	0	41	327
230	501	537	0,000	0	0	261
231	470	536	0,000	0	0	585
232	491	535	0,000	0	0	271
233	92	534	0,000	210	216	401
234	22	533	0,000	0	53	399
235	343	532	0,000	0	0	386
236	67	531	0,000	131	0	588
237	528	529	0,000	0	0	238
238	34	528	0,000	227	237	335
239	226	527	0,000	0	0	568
240	64	525	0,000	196	226	251
241	518	524	0,000	0	0	246
242	520	523	0,000	0	0	244
243	417	521	0,000	0	162	258
244	36	520	0,000	222	242	485
245	391	519	0,000	0	0	348
246	40	518	0,000	190	241	350
247	219	517	0,000	0	0	581
248	399	516	0,000	25	78	576
249	512	515	0,000	0	0	251
250	447	514	0,000	0	0	305
251	64	512	0,000	240	249	363
252	120	511	0,000	0	0	530
253	1	509	0,000	0	0	664
254	215	508	0,000	0	0	474
255	340	507	0,000	0	224	710
256	13	506	0,000	0	203	419
257	265	505	0,000	0	0	437
258	417	504	0,000	243	0	596
259	24	503	0,000	0	111	418
260	496	502	0,000	0	0	266

261	170	501	0,000	0	230	284
262	311	500	0,000	0	0	409
263	181	499	0,000	0	0	656
264	490	498	0,000	58	96	649
265	48	497	0,000	0	125	571
266	29	496	0,000	0	260	306
267	489	495	0,000	0	0	272
268	18	494	0,000	0	51	449
269	362	493	0,000	0	0	678
270	233	492	0,000	0	0	643
271	361	491	0,000	0	232	569
272	355	489	0,000	183	267	687
273	411	488	0,000	0	0	332
274	114	487	0,000	40	98	364
275	133	486	0,000	0	0	564
276	121	485	0,000	0	0	591
277	9	484	0,000	0	0	607
278	59	483	0,000	0	0	610
279	258	482	0,000	0	8	622
280	347	481	0,000	0	0	683
281	460	480	0,000	0	0	293
282	250	477	0,000	0	0	449
283	369	476	0,000	0	157	325
284	170	475	0,000	261	0	658
285	76	474	0,000	0	0	607
286	39	471	0,000	0	118	469
287	192	469	0,000	0	32	654
288	408	467	0,000	0	0	335
289	420	465	0,000	0	0	325
290	55	464	0,000	187	0	711
291	101	462	0,000	0	0	665
292	185	461	0,000	0	0	614
293	455	460	0,000	175	281	669
294	116	459	0,000	0	84	493
295	445	458	0,000	0	0	306
296	295	457	0,000	225	0	685
297	86	456	0,000	0	156	620
298	338	454	0,000	0	0	612
299	300	453	0,000	0	166	593
300	208	452	0,000	90	95	366
301	327	451	0,000	0	0	398
302	449	450	0,000	0	0	303
303	41	449	0,000	0	302	427
304	290	448	0,000	0	0	419

305	109	447	0,000	0	250	435
306	29	445	0,000	266	295	378
307	443	444	0,000	0	0	308
308	393	443	0,000	0	307	645
309	375	442	0,000	0	0	361
310	360	441	0,000	0	205	617
311	162	440	0,000	0	191	655
312	272	439	0,000	0	0	431
313	316	438	0,000	0	0	407
314	367	437	0,000	0	0	368
315	194	436	0,000	0	0	488
316	229	435	0,000	0	105	618
317	90	433	0,000	0	150	429
318	373	431	0,000	0	0	363
319	275	430	0,000	0	137	661
320	222	429	0,000	0	0	471
321	26	428	0,000	0	163	534
322	424	427	0,000	0	0	323
323	293	424	0,000	0	322	583
324	368	422	0,000	0	0	367
325	369	420	0,000	283	289	351
326	122	419	0,000	0	0	617
327	210	416	0,000	229	0	688
328	394	415	0,000	0	0	347
329	135	414	0,000	0	26	504
330	388	413	0,000	0	0	350
331	276	412	0,000	0	0	429
332	2	411	0,000	204	273	370
333	56	410	0,000	0	4	410
334	87	409	0,000	0	0	615
335	34	408	0,000	238	288	387
336	54	407	0,000	213	0	677
337	260	406	0,000	0	47	670
338	299	405	0,000	117	0	577
339	301	404	0,000	0	0	414
340	273	403	0,000	0	0	586
341	387	402	0,000	0	0	351
342	15	401	0,000	0	228	362
343	374	400	0,000	0	0	362
344	182	398	0,000	0	106	690
345	282	396	0,000	0	0	427
346	363	395	0,000	0	0	372
347	281	394	0,000	122	328	697
348	25	391	0,000	0	245	668

349	307	390	0,000	0	0	410
350	40	388	0,000	246	330	450
351	369	387	0,000	325	341	676
352	218	385	0,000	0	66	383
353	238	384	0,000	0	171	657
354	357	383	0,000	0	0	375
355	341	382	0,000	0	0	387
356	329	380	0,000	0	0	396
357	268	379	0,000	0	0	435
358	294	378	0,000	0	0	416
359	348	377	0,000	0	0	383
360	365	376	0,000	0	0	370
361	35	375	0,000	215	309	455
362	15	374	0,000	342	343	464
363	64	373	0,000	251	318	472
364	114	372	0,000	274	0	578
365	359	371	0,000	0	0	373
366	208	370	0,000	300	0	725
367	84	368	0,000	147	324	447
368	178	367	0,000	0	314	674
369	280	366	0,000	0	0	649
370	2	365	0,000	332	360	444
371	291	364	0,000	0	0	418
372	156	363	0,000	82	346	584
373	11	359	0,000	178	365	411
374	8	358	0,000	197	200	443
375	296	357	0,000	0	354	643
376	297	356	0,000	0	0	415
377	201	354	0,000	0	0	636
378	29	353	0,000	306	0	666
379	249	352	0,000	0	0	450
380	184	351	0,000	174	0	647
381	306	350	0,000	0	0	411
382	305	349	0,000	0	0	567
383	218	348	0,000	352	359	428
384	196	345	0,000	124	195	404
385	323	344	0,000	0	0	401
386	186	343	0,000	129	235	627
387	34	341	0,000	335	355	446
388	314	339	0,000	0	0	408
389	113	337	0,000	0	158	522
390	326	336	0,000	0	0	399
391	256	335	0,000	0	0	444
392	232	334	0,000	0	0	464

393	319	333	0,000	0	0	404
394	221	332	0,000	0	0	472
395	200	330	0,000	0	0	485
396	63	329	0,000	165	356	497
397	112	328	0,000	0	59	631
398	3	327	0,000	87	301	482
399	22	326	0,000	234	390	558
400	309	325	0,000	138	161	629
401	92	323	0,000	233	385	466
402	106	321	0,000	208	0	586
403	244	320	0,000	0	0	455
404	196	319	0,000	384	393	452
405	253	318	0,000	0	0	446
406	10	317	0,000	0	31	513
407	51	316	0,000	214	313	516
408	154	314	0,000	0	388	477
409	129	311	0,000	192	262	478
410	56	307	0,000	333	349	598
411	11	306	0,000	373	381	491
412	60	303	0,000	142	194	473
413	175	302	0,000	0	0	497
414	32	301	0,000	0	339	559
415	171	297	0,000	206	376	461
416	74	294	0,000	0	358	498
417	228	292	0,000	0	0	466
418	24	291	0,000	259	371	538
419	13	290	0,000	256	304	726
420	285	289	0,000	0	0	424
421	216	288	0,000	0	0	613
422	279	287	0,000	151	0	667
423	103	286	0,000	0	0	538
424	220	285	0,000	0	420	433
425	252	284	0,000	0	0	447
426	43	283	0,000	0	0	626
427	41	282	0,000	303	345	699
428	218	278	0,000	383	0	630
429	90	276	0,000	317	331	529
430	237	274	0,000	0	0	460
431	172	272	0,000	211	312	454
432	119	271	0,000	0	0	531
433	220	270	0,000	424	0	574
434	142	269	0,000	0	0	518
435	109	268	0,000	305	357	470
436	257	267	0,000	0	0	443

437	28	265	0,000	221	257	551
438	217	264	0,000	0	0	473
439	137	263	0,000	0	0	522
440	75	262	0,000	0	0	551
441	255	261	0,000	0	0	566
442	148	259	0,000	0	0	683
443	8	257	0,000	374	436	550
444	2	256	0,000	370	391	526
445	127	254	0,000	0	0	526
446	34	253	0,000	387	405	462
447	84	252	0,000	367	425	544
448	235	251	0,000	0	0	462
449	18	250	0,000	268	282	487
450	40	249	0,000	350	379	552
451	223	248	0,000	0	0	470
452	196	247	0,000	404	0	680
453	131	246	0,000	0	0	642
454	172	245	0,000	431	0	603
455	35	244	0,000	361	403	511
456	91	243	0,000	136	0	676
457	211	242	0,000	0	0	478
458	195	241	0,000	0	0	487
459	7	240	0,000	0	173	631
460	52	237	0,000	220	430	524
461	171	236	0,000	415	0	701
462	34	235	0,000	446	448	539
463	176	234	0,000	0	0	496
464	15	232	0,000	362	392	528
465	102	230	0,000	0	0	539
466	92	228	0,000	401	417	506
467	205	227	0,000	0	0	482
468	44	225	0,000	0	0	558
469	39	224	0,000	286	0	644
470	109	223	0,000	435	451	507
471	58	222	0,000	181	320	514
472	64	221	0,000	363	394	492
473	60	217	0,000	412	438	677
474	49	215	0,000	0	254	705
475	159	214	0,000	0	0	509
476	145	213	0,000	73	0	693
477	154	212	0,000	408	0	573
478	129	211	0,000	409	457	525
479	157	209	0,000	0	0	511
480	152	207	0,000	0	0	513

481	188	206	0,000	0	0	491
482	3	205	0,000	398	467	645
483	69	203	0,000	140	0	656
484	161	202	0,000	0	0	507
485	36	200	0,000	244	395	554
486	187	199	0,000	0	0	492
487	18	195	0,000	449	458	537
488	5	194	0,000	0	315	500
489	124	190	0,000	0	0	529
490	165	189	0,000	0	0	504
491	11	188	0,000	411	481	519
492	64	187	0,000	472	486	553
493	116	183	0,000	294	0	712
494	78	180	0,000	0	0	550
495	174	179	0,000	0	0	498
496	128	176	0,000	69	463	652
497	63	175	0,000	396	413	542
498	74	174	0,000	416	495	650
499	53	173	0,000	179	0	637
500	5	169	0,000	488	0	597
501	97	168	0,000	0	0	542
502	147	167	0,000	0	0	516
503	130	166	0,000	0	0	525
504	135	165	0,000	329	490	505
505	135	164	0,000	504	0	691
506	92	163	0,000	466	0	770
507	109	161	0,000	470	484	691
508	108	160	0,000	0	185	527
509	12	159	0,000	0	475	637
510	110	158	0,000	0	0	534
511	35	157	0,000	455	479	541
512	125	155	0,000	0	0	528
513	10	152	0,000	406	480	640
514	58	151	0,000	471	0	724
515	140	149	0,000	0	0	519
516	51	147	0,000	407	502	517
517	51	146	0,000	516	0	646
518	27	142	0,000	0	434	520
519	11	140	0,000	491	515	561
520	27	139	0,000	518	0	667
521	68	138	0,000	0	0	554
522	113	137	0,000	389	439	628
523	70	134	0,000	0	0	553
524	52	132	0,000	460	0	579

525	129	130	0,000	478	503	633
526	2	127	0,000	444	445	545
527	108	126	0,000	508	0	575
528	15	125	0,000	464	512	560
529	90	124	0,000	429	489	592
530	71	120	0,000	0	252	616
531	82	119	0,000	0	432	619
532	93	118	0,000	0	0	545
533	57	115	0,000	0	152	702
534	26	110	0,000	321	510	585
535	79	107	0,000	0	0	699
536	104	105	0,000	0	0	537
537	18	104	0,000	487	536	555
538	24	103	0,000	418	423	668
539	34	102	0,000	462	465	557
540	98	100	0,000	0	0	541
541	35	98	0,000	511	540	548
542	63	97	0,000	497	501	547
543	83	96	0,000	0	0	548
544	84	94	0,000	447	0	758
545	2	93	0,000	526	532	549
546	85	89	0,000	0	0	547
547	63	85	0,000	542	546	588
548	35	83	0,000	541	543	758
549	2	80	0,000	545	0	682
550	8	78	0,000	443	494	592
551	28	75	0,000	437	440	740
552	40	73	0,000	450	0	687
553	64	70	0,000	492	523	695
554	36	68	0,000	485	521	660
555	18	65	0,000	537	0	659
556	47	50	0,000	0	0	557
557	34	47	0,000	539	556	632
558	22	44	0,000	399	468	715
559	32	38	0,000	414	0	661
560	15	31	0,000	528	0	773
561	11	19	0,000	519	0	605
562	530	644	,002	0	0	624
563	77	308	,003	0	0	625
564	133	636	,006	275	0	698
565	239	522	,008	141	0	662
566	255	432	,010	441	0	604
567	305	423	,012	382	0	653
568	153	226	,015	0	239	644

569	361	674	,017	271	0	640
570	310	650	,020	0	52	713
571	48	572	,022	265	0	657
572	21	324	,025	177	0	641
573	154	566	,027	477	0	680
574	220	463	,030	433	0	669
575	72	108	,033	0	527	684
576	61	399	,035	0	248	634
577	299	736	,038	338	0	625
578	114	583	,041	364	0	606
579	52	143	,044	524	0	635
580	42	599	,047	146	100	658
581	111	219	,051	133	247	639
582	117	478	,055	116	176	609
583	293	315	,059	323	149	662
584	156	747	,064	372	12	595
585	26	470	,068	534	231	623
586	106	273	,073	402	340	608
587	45	539	,082	0	0	670
588	63	67	,092	547	236	642
589	141	633	,104	0	43	707
590	298	342	,116	0	102	663
591	121	331	,127	276	0	678
592	8	90	,141	550	529	747
593	300	545	,154	299	0	674
594	14	16	,167	0	182	696
595	20	156	,181	0	584	728
596	417	548	,195	258	0	664
597	5	231	,209	500	0	714
598	30	56	,224	0	410	665
599	17	792	,239	0	0	692
600	638	733	,254	0	0	695
601	198	466	,269	0	0	686
602	204	381	,284	0	0	704
603	136	172	,299	0	454	729
604	255	479	,315	566	0	638
605	4	11	,332	0	561	697
606	114	705	,349	578	0	716
607	9	76	,366	277	285	709
608	106	667	,384	586	0	684
609	117	277	,403	582	0	714
610	59	656	,423	278	0	689
611	313	653	,443	0	97	648
612	338	553	,463	298	0	703

613	123	216	,483	0	421	706
614	144	185	,503	0	292	721
615	81	87	,523	0	334	692
616	71	603	,545	530	80	673
617	122	360	,566	326	310	722
618	150	229	,587	207	316	693
619	82	678	,610	531	0	685
620	86	615	,633	297	0	671
621	389	397	,655	193	0	696
622	88	258	,678	0	279	694
623	26	740	,701	585	0	686
624	322	530	,724	2	562	690
625	77	299	,747	563	577	681
626	43	99	,770	426	127	734
627	37	186	,796	0	386	705
628	95	113	,821	0	522	708
629	309	542	,846	400	155	701
630	66	218	,872	0	428	711
631	7	112	,899	459	397	738
632	34	723	,928	557	0	759
633	129	193	,957	525	198	717
634	61	713	,986	576	56	702
635	52	468	1,015	579	74	742
636	201	513	1,046	377	18	672
637	12	53	1,076	509	499	723
638	255	434	1,106	604	0	732
639	111	734	1,137	581	15	679
640	10	361	1,172	513	569	698
641	21	549	1,207	572	16	709
642	63	131	1,243	588	453	688
643	233	296	1,280	270	375	675
644	39	153	1,316	469	568	729
645	3	393	1,353	482	308	703
646	51	191	1,392	517	86	743
647	184	510	1,432	380	132	700
648	313	446	1,472	611	0	727
649	280	490	1,515	369	264	725
650	74	473	1,559	498	38	752
651	33	472	1,602	37	219	732
652	128	421	1,645	496	188	735
653	6	305	1,688	217	567	720
654	192	526	1,734	287	209	706
655	162	392	1,779	311	189	737
656	69	181	1,824	483	263	733

657	48	238	1,870	571	353	731
658	42	170	1,916	580	284	713
659	18	304	1,966	555	108	717
660	36	312	2,017	554	143	762
661	32	275	2,069	559	319	704
662	239	293	2,124	565	583	719
663	298	386	2,180	590	67	716
664	1	417	2,237	253	596	723
665	30	101	2,294	598	291	707
666	29	426	2,355	378	154	719
667	27	279	2,415	520	422	708
668	24	25	2,478	538	348	710
669	220	455	2,546	574	293	724
670	45	260	2,615	587	337	744
671	86	746	2,685	620	0	734
672	201	763	2,756	636	0	735
673	62	71	2,829	13	616	727
674	178	300	2,901	368	593	718
675	233	425	2,975	643	0	745
676	91	369	3,052	456	351	738
677	54	60	3,128	336	473	739
678	121	362	3,210	591	269	718
679	111	418	3,292	639	218	736
680	154	196	3,376	573	452	751
681	77	177	3,459	625	223	747
682	2	346	3,544	549	0	780
683	148	347	3,634	442	280	741
684	72	106	3,727	575	608	742
685	82	295	3,821	619	296	730
686	26	198	3,921	623	601	736
687	40	355	4,022	552	272	749
688	63	210	4,125	642	327	764
689	59	266	4,230	610	186	748
690	182	322	4,337	344	624	712
691	109	135	4,445	507	505	750
692	17	81	4,558	599	615	720
693	145	150	4,671	476	618	731
694	46	88	4,788	101	622	740
695	64	638	4,909	553	600	748
696	14	389	5,034	594	621	721
697	4	281	5,159	605	347	751
698	10	133	5,284	640	564	746
699	41	79	5,413	427	535	755
700	23	184	5,544	144	647	737

701	171	309	5,710	461	629	750
702	57	61	5,877	533	634	722
703	3	338	6,046	645	612	739
704	32	204	6,221	661	602	730
705	37	49	6,397	627	474	755
706	123	192	6,590	613	654	752
707	30	141	6,797	665	589	753
708	27	95	7,005	667	628	743
709	9	21	7,214	607	641	733
710	24	340	7,428	668	255	768
711	55	66	7,652	290	630	759
712	116	182	7,884	493	690	765
713	42	310	8,121	658	570	728
714	5	117	8,372	597	609	756
715	22	197	8,634	558	212	769
716	114	298	8,900	606	663	753
717	18	129	9,194	659	633	726
718	121	178	9,488	678	674	760
719	29	239	9,795	666	662	766
720	6	17	10,112	653	692	754
721	14	144	10,442	696	614	761
722	57	122	10,773	702	617	767
723	1	12	11,115	664	637	764
724	58	220	11,457	514	669	763
725	208	280	11,805	366	649	762
726	13	18	12,160	419	717	775
727	62	313	12,516	673	648	771
728	20	42	12,884	595	713	746
729	39	136	13,254	644	603	754
730	32	82	13,626	704	685	772
731	48	145	14,010	657	693	756
732	33	255	14,395	651	638	757
733	9	69	14,795	709	656	777
734	43	86	15,214	626	671	745
735	128	201	15,664	652	672	757
736	26	111	16,127	686	679	744
737	23	162	16,598	700	655	760
738	7	91	17,070	631	676	749
739	3	54	17,564	703	677	761
740	28	46	18,086	551	694	741
741	28	148	18,628	740	683	768
742	52	72	19,172	635	684	763
743	27	51	19,765	708	646	767
744	26	45	20,405	736	670	765

745	43	233	21,056	734	675	781
746	10	20	21,712	698	728	784
747	8	77	22,392	592	681	772
748	59	64	23,094	689	695	769
749	7	40	23,811	738	687	776
750	109	171	24,551	691	701	778
751	4	154	25,307	697	680	774
752	74	123	26,066	650	706	779
753	30	114	26,838	707	716	786
754	6	39	27,806	720	729	785
755	37	41	28,784	705	699	776
756	5	48	29,772	714	731	777
757	33	128	30,979	732	735	766
758	35	84	32,218	548	544	775
759	34	55	33,497	632	711	780
760	23	121	34,792	737	718	773
761	3	14	36,196	739	721	783
762	36	208	37,660	660	725	770
763	52	58	39,233	742	724	774
764	1	63	40,957	723	688	782
765	26	116	43,013	744	712	782
766	29	33	45,110	719	757	785
767	27	57	47,221	743	722	771
768	24	28	49,555	710	741	789
769	22	59	52,201	715	748	787
770	36	92	54,858	762	506	779
771	27	62	57,520	767	727	786
772	8	32	60,355	747	730	784
773	15	23	63,884	560	760	781
774	4	52	67,841	751	763	788
775	13	35	71,804	726	758	790
776	7	37	76,218	749	755	778
777	5	9	80,688	756	733	787
778	7	109	85,322	776	750	792
779	36	74	89,987	770	752	795
780	2	34	94,797	682	759	783
781	15	43	99,703	773	745	793
782	1	26	104,887	764	765	791
783	2	3	111,904	780	761	792
784	8	10	119,257	772	746	788
785	6	29	127,293	754	766	789
786	27	30	135,544	771	753	791
787	5	22	144,462	777	769	793
788	4	8	158,170	774	784	794

789	6	24	180,157	785	768	790
790	6	13	205,182	789	775	797
791	1	27	233,801	782	786	795
792	2	7	275,989	783	778	794
793	5	15	330,879	787	781	796
794	2	4	413,111	792	788	797
795	1	36	498,898	791	779	796
796	1	5	641,693	795	793	798
797	2	6	1026,520	794	790	798
798	1	2	1596,000	796	797	0

Statistics

Ward Method	Symbolic and Emotional	Utility
1 N Valid	335	335
Missing	0	0
Mean	-,2434282	-,9632971
Std. Deviation	,88224579	,60484917
Minimum	-1,97568	-1,99827
Maximum	1,66859	,22182
2 N Valid	464	464
Missing	0	0
Mean	,1757510	,6954839
Std. Deviation	1,04317708	,55089266
Minimum	-1,85152	-,47845
Maximum	1,91691	1,81476

Initial Cluster Centers

	Cluster	
	1	2
Symbolic and Emotional	-1,97568	1,91691
Utility	-1,15794	1,04137

Iteration History^a

Iteration	Change in Cluster Centers	
	1	2
1	1,450	1,394
2	,079	,079
3	,072	,074
4	,071	,072
5	,039	,038
6	,028	,028
7	,010	,011
8	,004	,004
9	0,000	0,000

a. Convergence achieved due to no or small change in cluster centers. The maximum absolute coordinate change for any center is ,000. The current iteration is 9. The minimum distance between initial centers is 4,471.

Final Cluster Centers

	Cluster	
	1	2
Symbolic and Emotional	-,82384	,84684
Utility	-,08090	,08316

ANOVA

	Cluster		Error		F	Sig.
	Mean Square	df	Mean Square	df		
Symbolic and Emotional	557,433	1	,302	797	1846,777	,000
Utility	5,375	1	,995	797	5,405	,020

The F tests should be used only for descriptive purposes because the clusters have been chosen to maximize the differences among cases in different clusters. The observed significance levels are not corrected for this and thus cannot be interpreted as tests of the hypothesis that the cluster means are equal.

Number of Cases in each Cluster

Cluster	1	405,000
	2	394,000
Valid		799,000
Missing		0,000

Appendix O

Assuming model Unconstrained to be correct:

Model	DF	CMIN	P	NFI Delta-1	IFI Delta-2	RFI rho-1	TLI rho2
Measurement weights	22	17,851	,715	,001	,001	-,002	-,002
Structural weights	33	65,761	,001	,003	,003	,000	,000
Structural residuals	51	89,070	,001	,004	,005	-,001	-,001
Measurement residuals	122	171,216	,002	,008	,009	-,005	-,005

Assuming model Measurement weights to be correct:

Model	DF	CMIN	P	NFI Delta-1	IFI Delta-2	RFI rho-1	TLI rho2
Structural weights	11	47,909	,000	,002	,002	,001	,002
Structural residuals	29	71,218	,000	,004	,004	,001	,001
Measurement residuals	100	153,364	,000	,008	,008	-,003	-,003

Assuming model Structural weights to be correct:

Model	DF	CMIN	P	NFI Delta-1	IFI Delta-2	RFI rho-1	TLI rho2
Structural residuals	18	23,309	,179	,001	,001	-,001	-,001
Measurement residuals	89	105,455	,112	,005	,005	-,005	-,005

Assuming model Structural residuals to be correct:

Model	DF	CMIN	P	NFI Delta-1	IFI Delta-2	RFI rho-1	TLI rho2
Measurement residuals	71	82,146	,172	,004	,004	-,004	-,004